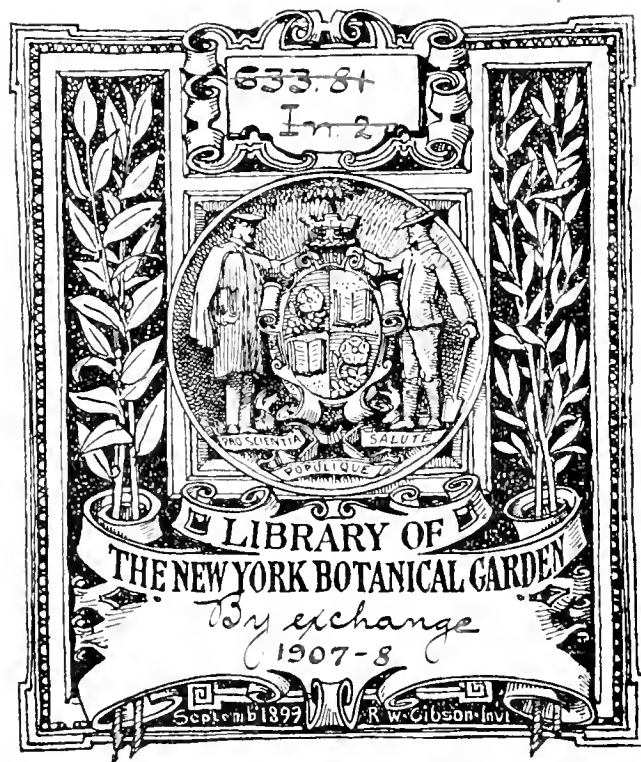


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OCTOBER 1, 1907.

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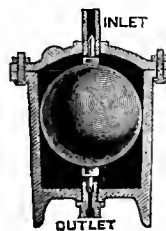
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SOME LARGE RUBBER PROFITS.

IT is no longer necessary to argue that rubber can be produced on plantations, any more than in the case of rice or tea or cotton. Nor is it any longer a question whether it can be produced profitably. It is not by way of argument, therefore, that we refer here to some details from the latest report of the Vallambrosa estate which appear on another page. Our reason for selecting this company for special remark is both on account of the extent of the plantation and the fact that it is purely a rubber proposition, whereas the accounts of many of the other rubber producing companies in the Far East relate to other products as well as rubber.

Briefly the history of the company is this: Early in 1904 the owners of three neighboring estates in the Federated Malay States, or their representatives, got together in Edinburgh and formed a company for the amalgamation of their interests. Some rubber had been planted during 1898 and the succeeding years, and the company planned to plant a lot more rubber. The new company issued shares of the par value in American money of \$218,902.50, which they divided among themselves, while they allowed others to subscribe for \$27,252.40 in shares, making a total issue of \$246,244.90, which is the amount of capital stock now outstanding.

From the date mentioned the work of the company was that of development and additional planting. When the company was two years old—by which time the oldest

rubber trees were six years old—it had marketed 39,113 pounds of rubber, with the result that the profit and loss account had a credit of \$23,598.00. No dividend was declared, however.

The figures for the third year—ended March 31, 1907—are of surpassing interest, viewed in comparison with agricultural profits generally. The company marketed 156,922 pounds of rubber for \$195,900.90 at a profit of \$1 per pound, gold, estimated by deducting from the cash proceeds the cost of tapping the trees, coagulating, packing and transportation. The average yield per tree, from six to eight years in age, was about one pound. But meanwhile much additional planting had been done and this and the whole cost of the upkeep had been charged to revenue, so that the company figured its net profit at only \$147,100.76. After a liberal allowance for directors' fees and a handsome "carry over" to the next year's account, the dividend declared for the year was 55 per cent on the capital stock issued, or a total of \$135,489.70. The net results from the rubber marketed would have yielded a dividend of 63½ per cent on the total capital. Is it any wonder that shares have changed hands recently in London at 9½ times their par value—\$46.84 for £1 shares?

While no other rubber planting company thus far has made such a favorable showing, it must be noted that no other rubber plantation on a similar scale is yet so fully developed. As for yield, the first year's planting on Highlands and Lowlands estates yielded during the last twelvemonth over 7 pounds per tree. Suppose all the Vallambrosa trees should do as well, when all of them reach the same age as at Highlands, at which time there would be no most cost of planting to be charged against revenue. At the prevailing rates for rubber the dividends would amount to several hundred per cent a year. With such results possible it is easy to understand the complacency with which rubber planters in the Far East discuss the possibility, in the remote future, of rubber prices dropping to 3 shillings [=73 cents] a pound.

RUBBER CONSOLIDATION IN ENGLAND.

THERE has not yet existed in England any such amalgamation in the rubber goods industry as the American newspapers refer to habitually as "rubber trusts." But it might be suggested that, while differing in form, certain cases of community of interest in the British rubber industry are based upon the same principles as those upon which the American combinations have been based.

For example, a mechanical goods manufacturing company at Manchester has been reorganized lately under the control of the long-established Macintosh firm, who finance it and name the directors. The same firm not long since adopted a similar relation to another rubber factory near Manchester. But the different concerns each maintain a separate corporate existence with nothing in the

conduct of the business to suggest a connection with the important house of Macintosh. Similarly the Frankenberg firm, also in Manchester, making rubber articles in many lines, now control a large factory making other lines which originally was a separate concern and is still advertised under a name and style of its own. And the house of Mandelburg—we are still in Manchester—specialists in the waterproofing branch, have taken over and reorganized a factory in the mechanical line at Woodley, but without directly amalgamating the two businesses.

At the last annual meeting of the Leyland and Birmingham company—itsself the result of an amalgamation only a few years ago—it was announced that during the twelvemonth two smaller concerns had been acquired, though it is not announced whether the latter will retain the names in use hitherto. Likewise the latest report to the shareholders of the Callender firm, in the insulation field, announces that they have acquired sole control of the Anchor Rubber Co., and invested a large sum in the shares of two other companies.

From the above it will be seen that within a year considerable progress has been made in the way of consolidation in the English rubber industry, while in the meantime we recall no new rubber enterprise in that country launched upon an important scale. There may have been no apparent decrease in the list of rubber factories, but there has been a falling off in the number of distinct, separate enterprises. A pertinent question is: How does the changed condition differ from that resulting in America when a number of factories are brought under a single control by the floating of a big public company under a new name?

It goes without saying that the various English rubber companies that have passed under the control of other concerns had become, for some reason or other, less able than formerly to maintain an independent existence. Or else, some advantage appeared likely from amalgamation with larger or more capably managed companies. And what about the buyers of these businesses? A firm like Macintosh, for example, being in a position to extend their business, found certain factories equipped for making certain lines of goods, with an established reputation for their products, but possibly with some weak element in their organization which led their managers to consider propositions for reorganization. And in this set of conditions, with the results present and prospective, we see nothing essentially different from what has happened in the way of rubber consolidation in the United States. It might be added here that every important American factory that has entered any of the so-called "trusts" is still known to the people who buy their goods under their old-time name. In fact THE INDIA RUBBER WORLD is in constant receipt of inquiries as to whether this or that rubber factory belongs to the "trust."

We are no advocate of trust building or of trust "bust-ing," our interest being in recording the news of the

trade. We have held to the idea, however, that the best thing for any trade is liable to be worked out by the combined intelligence of its leaders. Seeing, therefore, that the various combinations formed generally hold together, some salient advantages must result to certain concerns by the combination of the best talent which they possess, in the field of production, in the distribution of goods, and in financial administration. But while this may be best for some groups of concerns, other companies continue to succeed and to grow as independents, showing that large aggregations of capital are not always essential, and in this fact lies not the least hope of the rubber industry. The possibilities of success of an independent factory, even on a small scale, will encourage men to engage in the industry who otherwise might be debarred from it, and who, by working for themselves, may develop ability of a higher order, and consequently more progressiveness, than it is natural for most men to attain as part of a great corporate machine where individuality is at a discount.

THE BOTANICAL BEDLAM.

THERE need be no surprise over the fact that so many practical men set small store by the work of the botanists. To the average person they appear to be engaged mainly in quarreling over the Latin name to be given to a particular plant. Is it strange that men ask what does it all amount to?

Take the scientific nomenclature of rubber species. For years the principal supplies of African rubber were supposed to come from the climber described botanically as *Landolphia florida*. Then other species of *Landolphia* were credited with more and more of the African output, until a good sized book was necessary to list all the *Landolphias* that had been described. Then it began to be suspected that the *Landolphia* This described by Mr. B. and *Landolphia* That described by Mr. C. were none other than *Landolphia* Something-else described long before by Mr. A., and to-day the confusion among the botanists over the different *Landolphias* is worse than the linguistic difficulties that stopped work on the tower of Babel. To go back to *Landolphia florida*, it is generally agreed by the botanical sharps that it doesn't yield any rubber of commercial value.

To come nearer home: Just as everybody interested had got accustomed to spelling *Manihot Glaziovii* as the botanical designation of the rubber tree of Ceará, in Brazil, known to the natives as "manicoba," the whole business threatens to be upset by the discovery that certain rubber trees farther south, also known locally as "manicoba" and assumed to be the same tree, really are not the same. "Manicoba" rubber is being planted in Bahia and in Ceará and the intermediate state of São Paulo, and everywhere referred to botanically as *Manihot Glaziovii*. And "manicoba" rubber is being planted in Central America, Asia, Africa and the Pacific islands, all under the name *Manihot Glaziovii*. The results attained

have varied greatly. The highest values realized for any rubber in the London auctions now is paid for plantation "Ceará" from Ceylon. Some other results attained with supposed Ceará rubber have been wholly disappointing. What will come from the planting of millions of other "Ceará," "manigoba," or "*Manihot Glaziovii*" not yet old enough to yield rubber only time can tell. The point is that not all trees known to South American natives as "manigoba" are equally valuable rubber producers. The question for the planters is: Who has got the right tree planted? Now here is where the botanists ought to have been of service. And here is where the botanists will be blamed in case some of the planted *Manihot* does not turn out as expected. But blaming the botanists will not prove their science wholly without value—only that too much of their work has not been done on truly scientific lines.

If a Mexican names a rubber tree *Euphorbia clastica*, and it is found later that somebody in Madagascar has already given that name to a rubber plant, and one of the staff at Kew comes out and calls the Mexican tree *Euphorbia fulva*—how in the name of sense is anybody going to keep up with the record? There is needed, in the first place, an international central station or central body to which the naming of plant species should be referred, with a view to the avoidance of such confusion. The individual botanist browsing about in Africa should not attempt to name every plant that is new to him, without regard to what another botanist elsewhere in Africa may be doing. It is not necessary that every plant discovered to-day should be named in Latin before morning. The world can wait for an international agreement on a designation, the use of which can be defended.

Here is intended no reflection upon the ability of the men who have been naming rubber species. Did not the elder Hooker, the celebrated director at Kew, commit an error in naming the first gutta-percha species brought to him, which his son, later in charge at Kew, attempted to rectify, but only after Blume, on the continent, had given the tree another name by way of correction, so that we are confused to-day by finding in the books three names for the same tree? The trouble was that the species was named in the first place without sufficient investigation, and that the renaming of it was done without consultation or co-operation of authorities.

There are certain well defined grades of commercial rubber clearly recognized by the factory superintendent. Take, for example, "Pará." Botanists to-day have agreed to call the tree yielding this *Hevea*, but they enumerate many species of *Hevea*, inclining to the idea that the best rubber comes from *Hevea Brasiliensis*, while some other *Heveas* yield no rubber. There would be a distinct advantage to the world in settling the question of what tree yields the rubber that ranks highest in the market, of how to distinguish this tree, and of how to avoid any worthless species of *Hevea*, either in exploiting forest concessions or in forming plantations. But this is not to be accomplished by the individual botanist working alone, at his

own expense, in the dark as to what others are doing.

We need co-operation of the botanists, with the aid of liberal funds, and with the assistance of commercial experts, chemists, and manufacturing experts, in order that not only plant species shall be distinguished, but the quality of their product—for this last item is all that counts in the end.

THE UTILITY OF THE TIRE INVENTORS was never so great as now, but not one in a hundred new tire ideas patented seems to make any impression on the trade or the public. Now that the more notable patents in this field are nearing expiration it may be worth while to consider that most of them have survived only at a heavy cost for defending their validity. In another year or two the "clincher" type will become public property in America as it is already abroad, and unless something decidedly better should be invented no tire inventor need hope for any such harvest in royalties as has been reaped in some quarters in the past. But what a small share of these royalties has gone to the tire inventors of record?

WHEN WILL ALL THE RUBBER TRADE BE HAPPY? With Pará rubber so near the \$1 level again certain shareholders in English factories have looked for larger dividends than have been forthcoming lately. But Africans show no such tendency to decline, and the companies are still obliged to offer the explanation that the cost of raw material remains inordinately high as compared with the selling prices realizable.

THE DIVIDENDS OF A CERTAIN RUBBER PLANTING COMPANY, not to speak of its name, must suggest to its shareholders "falling leaves in Vallambrosa."

WITH LAIOTI RUBBER HIGHER THAN PARA it is hard to see how the royal philanthropist of the Congo can avoid making some profit, whatever his objection to becoming rich in his old age.

THE GOVERNORS OF THE TWO AMAZON STATES who took occasion in their last annual messages to advise their people to plant rubber have not yet made any suggestion toward the exemption of plantation products from the heavy duties now imposed on all rubber exports. We doubt whether much rubber would be grown anywhere if the prospect of paying 23 per cent. of the selling price to the state faced the planters.

THE GROWTH OF THE WORLD'S INTEREST IN RUBBER can be measured by the growth of the literature of this subject. Whereas, ten years ago, the number of practical books relating to rubber in any way could be counted on one's fingers, it would be an exceptional man who could, by devoting his whole time to the subject, read all that is being printed to-day about rubber and its applications.

THOMAS A. EDISON, in an interview in the New York *Electrical Review*, is quoted as predicting the ultimate supremacy for the electric motor car in view of the success that is being attained in perfecting the storage battery. A writer in the New York *Sun* says the greatest obstacle in the path of the electric vehicle is either the cost or the difficulty of obtaining current with which to charge the batteries.

G. GUERIN recommends the application of two coats of a syrupy solution of Pará rubber in benzine for the preservation of india-rubber tubes. It is said that the tubes receiving this treatment preserve their softness for a long time and do not absorb any liquid passed through them.—*Chemist and Druggist*.

THE EDITOR'S BOOK TABLE.

THE TRUTH ABOUT THE CONGO. THE CHICAGO "TRIBUNE" Articles. By Frederick Starr. Chicago: Forbes & Co. 1907. [Cloth. 8vo. Pp. viii + 120. Price, \$1.]

THE author of this book asserts that its title was not of his choosing, though he believes his statements all to be true. It is written in a convincing manner, at any rate, and well calculated to hold the interest of the reader. Professor Starr, who is at the head of the anthropological department of the Chicago University, first became interested in the Congo through seeing at the St. Louis exposition three years ago a group of natives of that country brought over by Mr. Verner, who is now in the Congo Free State in the interest of an American rubber company. The professor next got hold of some Congo Reform Association documents and decided to see for himself the alleged horrors they depicted. He says that he paid his own expenses, making his journey as the representative of no institution or society, and feels free to speak his mind.

Our author while in the Congo saw floggings, chain gangs, prisons, heavy taxation, enforced labor, depopulation—but no frightful outrages. For instance, he says flogging is general throughout the Free State, as it was before the Belgians ever went there; the state flogs the black man, the traders do it, the missionaries do it. Did he not hear a missionary speak of some native boys who had been "flogged into the kingdom of heaven"? Not that they had died as a result of flogging, but had found salvation through its means. The chain gangs Professor Starr saw did not seem to him worse than those in the southern United States. The population appears to be falling off, but this is explained by our author as not being due to wholesale murder by the State, as has been alleged.

Professor Starr saw rubber trading mainly at stations of the Compagnie du Kasai. He saw people come in singing and dancing with baskets full of balls of rubber on their heads, their chief being carried in state at the head of the procession. The rubber being weighed, the gatherers hurried to the store to be paid in goods from an abundant stock at the regular price of 1.25 francs per kilogram, or a little less than 11 cents a pound. All labor, however, is not performed so cheerfully. The native as a rule doesn't like to work, and Professor Starr doesn't see why he should not idle. But the State in forcing him to work for it doesn't cause him to neglect any private interest more pressing than drinking, dancing and palavers.

It only remains to say that the author was unable to verify the stories of Congo atrocities in Mr. Morel's "Red Rubber" and other books of its kind. He does not appear as an apologist for King Leopold, but he does charge that the hubbub about misrule in the Congo has been raised by Britishers for selfish reasons.

CANADA'S CENTURY: PROGRESS AND RESOURCES OF THE Great Dominion. Notes, with Snapshots and Other Illustrations of an Extensive Tour in British North America. By R. J. Barrett, F. R. G. S., Editor of the *Financier and Bullionist*. London: The Financier and Bullionist, Limited. 1907. [Cloth. 8vo. xiv + 538. Price, 6 shillings, net.]

The marked development in progress in the great Dominion to the north of us has prompted Sir Wilfred Laurier, her premier, to remark: "The nineteenth century was the century of the United States; the twentieth century will be Canada's century." This remark has suggested the title of the book before us, made up of a series of letters written for a leading London financial journal by its editor, who spent several months in personal investigation in preparation for his work. Mr. Barrett crossed the continent on Canadian railways, availing himself of every opportunity to inform himself of the resources of the country and what the people are doing to develop them; from all of which he concludes that one can hardly be too optimistic regarding the future of the Dominion. It must not be overlooked that Canada is considerably larger than the United States (excluding Alaska), with a wide variety of mineral and forest resources and agricultural possibilities, the greater part of which remain to be devel-

oped. But the work of settling waste lands has been progressing rapidly of late, encouraged by the building of railways for prospective traffic—just as was done in the opening up of the western United States—and the new population is not only of a high type, but cannot fail to afford a greatly widened field for Canadian manufactures and commerce. Mr. Barrett believes in the closer binding together of British dependencies, and looks forward to the time when the all British route from England to Australia via Canada will play an important part in the development of the imperial idea. Apart from the interesting character of the facts summarized in this volume, it is most entertainingly written, while the numerous pictures, based upon "snapshots" taken by the author, serve to bring the scenes described nearer to the reader than mere written words could have done.

NOTES ON RUBBER CULTIVATION; WITH SPECIAL REFERENCE to Portuguese India. By J. A. Wyllie, F. R. G. S., and Octaviano Guilherme Ferreira, M. R. H. S. Madras: Higginbotham & Co. 1907. [Cloth. 8vo. Pp. xiv + 131. Price, 4.50 rupees.]

THESE "Notes," the preface states, were intended originally for publication in Portuguese only, with a view to stimulating the planting of rubber in Goa, the Portuguese possession on the western coast of India. But since they appeared equally applicable to the surrounding British districts, it was decided to bring out simultaneously the English edition now before us. Of the joint authors, Lieutenant Colonel Wyllie gained considerable experience in rubber while in charge of the government rubber plantations at Rangoon, Burma [see THE INDIA RUBBER WORLD, April 1, 1902—page 210], while Senhor Ferreira is director of the national library at Nova Goa. The "Notes" are offered mainly as a résumé of results in rubber planting recorded by others, with an occasional observation based upon personal experience. They relate to the principal rubber species, of each of which a fairly good description is given. The sources of information are fully credited, THE INDIA RUBBER WORLD being quoted a number of times. As a compilation this is a creditable book, and it is worth a place in the rubber planter's library. There are 16 capital half-tone views of rubber trees and tapping and other processes.

THE SCIENCE OF PARA RUBBER CULTIVATION. A SERIES OF Lectures Delivered in Ceylon and London. By Herbert Wright, A. R. C. S. Illustrated. Colombo: A. M. & J. Ferguson. 1907. [Paper. Large 8vo. Pp. iv + 57. Price, 3s. 4d.]

FIVE of the six lectures here collected were delivered before planters, including one at the Ceylon Rubber Exhibition. The series relates to practical questions, such as distance in planting, pruning, tapping, manuring and the like. All the lectures have been published before, but their value is enhanced by bringing them together in convenient form.

IN CURRENT PERIODICALS.

SUR l'Exploitation des guis à Caoutchouc de l'Amérique Centrale. [The rubber producing mistletoe.] By O. Labroy.—*Journal d'Agriculture Tropicale*, Paris. vii:72 (June, '07). Pp. 163-167.

Über den gegenwärtigen Stand und die Aussichten den Guayuleindustrie. [The present condition of the guayule rubber interest and its prospect.] By Dr. Rudolf Endlich.—*Der Treppflanzer*, Berlin. xi:7 (July, '07). Pp. 449-469.

Etude des Variations Botaniques et Physiologiques de l'*Hevea Brasiliensis* Appliquée à la Sélection. By Georges Vernet.—*Journal d'Agriculture Tropicale*, Paris. viii:73 (July 31, '07). Pp. 195-203.

NOVEL USE OF A HOT WATER BOTTLE.—A story comes from Wichita, Kansas, of the ingenuity of a farmer's wife, which was signally demonstrated on the occasion of the death of a setting hen to which had been entrusted some fancy eggs. The lady in question didn't want to buy an incubator for only 14 eggs, but she did have a rubber hot water bottle, and by keeping this at the right temperature, day and night, she had the satisfaction in due time of welcoming a fine brood of new chicks.

RUBBER CASTORS.—Rubber and leather castors are now frequently put upon furniture which is to be placed on a hardwood or stained floor. Some housekeepers and decorators, however, recommend instead the castor cups.

Rubber Planting in Samoa.

ALREADY several plantations of rubber have been formed in Samoa, generally in connection with estate concerns, devoted to coconuts and other crops. Not that interest is declining in the latter, but rubber is being looked to as an additional source of planting profit. The Samoan group embraces ten inhabited islands, of which the principal ones are Savaii, with 700 square miles; Upolu, 500 square miles; Tutuila, 240 square miles; and Manua, 100 square miles. Generally the interior of these islands is mountainous and wooded and little known, the native living on the flat lands near the coasts. There is good land in Savaii and some plantations have been formed with foreign capital, mostly German. Upolu is the most important island in the group, and embraces Apia, which is the center of Samoan agricultural and commercial interests. Tutuila, which, with some small neighboring islands, is under the United States flag, is wholly unsuited for planting purposes, but here is the best harbor in the Pacific. The climate of the group is, of course, tropical, but tempered with winds and rainfalls to a degree which fits the islands for residence by Europeans.

The Deutsche Handels- und Plantagen-Gesellschaft der Südsee Inseln zu Hamburg, A.-G., with its main agency in Apia, which is

the largest planting company in the Pacific, is doing business in the Pacific for a half century. It is most active for the developing of these islands. No colony in the group possesses the largest coconut plantations in the world. The first plantations were situated on the island of Upolu. It was also this firm which made the first experiments in the line of cacao growing and as the experiments turned out to be successful, this industry was taken up by this firm and others as well as by private settlers, and many plantations were started for the growing of cacao which is doing well and part of which has already come into bearing. Coffee was also planted years ago, but was dropped again as it does not pay any more in Samoa.

About nine years ago the Deutsche Handels- und Plantagen-Gesellschaft started with experimental rubber growing. One of the accompanying illustrations shows an eight year old *Castilleja elastica* growing on the Vatele plantation of the firm. On the Vatele plantation Captain Hufnagel experimented for several years and succeeded in raising some fine trees of *Hevea* and *Castilleja* on the northern slopes of the mountains. Among others, Mr. T. Andrew, of Apia, went in for rubber planting about six years ago and planted a grove of rubber trees on his plantation some distance from Apia. He lately furnished Mr. George Heimrod, American consul general in Apia, some details regarding the result, which have been printed in the *Daily Consular Reports*. He tapped three *Hevea Brasiliensis* trees, aged 6 years and 3 months from the seed, grown at an altitude of 1100 feet. In circumference they were 24½ inches, 23 inches, and 21½ inches, at 3 feet from the ground. The three trees were each tapped four times, in March and April, 1906, and the total product was 9 ounces of dry rubber. Mr. W. Von Bulow, in



EIGHT YEAR OLD "CASTILLEJA ELASTICA."

[On the Vatele plantation of the Deutsche Handels- und Plantagen-Gesellschaft der Südsee Inseln zu Hamburg, A.-G., on Upolu island, in the Samoan group.]



"HEVEA BRASILIENSIS" ONE YEAR OLD.

[On the plantation of the Sifata-Samoa-Gesellschaft, near Apia.]



"HEVEA BRASILIENSIS" EIGHTEEN MONTHS OLD.

[This is another view of the same tree shown in the preceding illustration.]



"HEVEA BRASILIENSIS" SIX MONTHS OLD.

[Nurseries on the estate of the Safata-Samoa-Gesellschaft.]



"FICUS ELASTICA" ONE YEAR OLD.

[Estate of the Safata-Samoa-Gesellschaft.]



"FICUS ELASTICA" FIFTEEN MONTHS OLD.

[The same tree as in the opposite illustration, three months later.]

Savali, who is also interested in rubber growing, planted quite a number of *Hevea* and *Castilloa* about seven years ago, and seems satisfied with the results.

All these experiments show that rubber growing in Samoa might be taken up with success, and now the general attention is drawn more and more toward this business and efforts are made everywhere to introduce this new industry to Samoa on a larger scale, especially as the climatic conditions of the group and the soil seem to be favorable to the growth of rubber trees of the various kinds.

The Samoa-Kautschuk-Compagnie A. G., of Berlin, formed in 1905, and having now a capital of 2,000,000 marks (= \$470,000), is under the direction of W. Mertens, in Berlin, with R. Gehlen, of Apia, agent for Samoa. This company has its land on the northern slopes of the mountains beyond the native village of Falefua, a few miles west of Apia. The enterprise started with the planting of *Hevea* and *Castilloa*. The trees are, of course, not yet old enough for tapping.

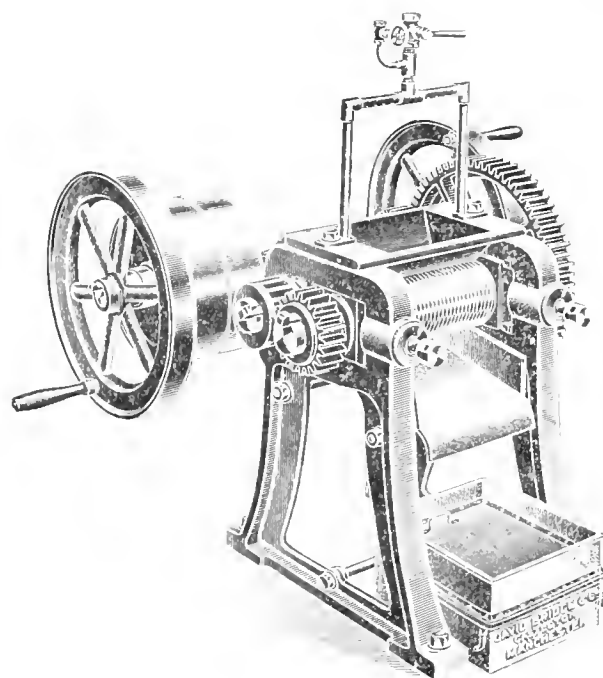
Another company is the Safata-Samoa-Gesellschaft, also of Berlin, founded in 1903 and capitalized at 1,500,000 marks (= \$300,000). Herr Mertens is the director and A. Krause agent in Apia. The property of this company is situated about two miles south of Apia. This concern is chiefly growing coconuts and palms, but has taken up rubber seriously. Two of the illustrations are reproduced from photographs taken on their plantation. One represents a one year old *Hevea* and another the same tree after the growth of six months. The other illustrations are sufficiently described by the lines underneath them.

Two other companies to be named are the Tiavi Kautschuk-Pflanzungen auf Samoa, formed recently in Berlin, with 1,000,000 marks (= \$238,000) capital, and the Upolu Rubber Co., Limited, about which the only information at hand is that it is administered from Glasgow, Scotland, is on a fairly large scale, and is planting *Funtumia elastica*, at least in part.

The most serious problem for Samoa in connection with planting is the labor question. For years the Deutsche Handels company imported Solomon islanders as laborers for its own needs, as the Samoans won't work. Some years ago experiments were made with Chinese coolies, which proved rather satisfactory and the German government has taken the matter up now and imports Chinamen on contracts of three years' duration for the needs of the planters and settlers. If the coolies give continuous satisfaction, the problem may perhaps be solved this way.

PLANTATION RUBBER WASHERS.

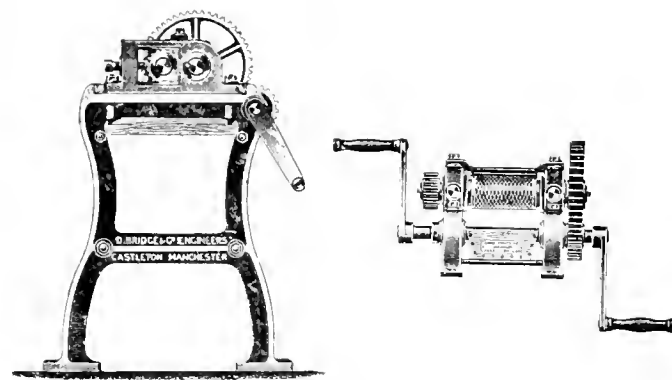
THERE is shown here a view of a machine for washing and sheeting rubber on plantations. This machine is generally similar in design to a small ordinary washing machine used in rubber goods factories. It is fitted with two hard, close grained cast iron rollers, 6 inches in diameter and 12 inches long, with diamond cut face and fitted with roller end wheels arranged to drive the rollers at unequal speed. Larger sizes are also made. A strong cast iron hopper is fitted over the rollers and water drip arrangement with regulating cock and steam valve, so that the drip water may be heated if required. The rollers are mounted in heavy cast iron frames, with sliding blocks for front roller and setting up screws. The driving arrangement consists of a shaft at the back of the machine, supported from the frames and fitted with large diameter; two flywheels with handles in rims, fast and loose pulleys, with belt shifting apparatus, for belt driving and spur pinion driving into the large wheel on end of back roll. An inclined tray of galvanized iron is fitted on the stays beneath the rollers and a specially designed draining arrangement is fitted to prevent the escape of latex or small pieces of rubber. The approximate weight of the machine is 23 cwt. The output will vary as the material, being between 3 to 5 cwt. of washed rubber per day. Many of these machines are working on rubber plantations in different countries. Where power is



RUBBER WASHING AND SHEETING MACHINE FOR PLANTATION WORK.

not available the smaller sizes are used, being operated by hand. The makers are David Bridge & Co., Castleton, Manchester, England.

The second of the illustrations herewith relates to an earlier form of rubber washing and sheeting machine for plantation work, formerly marketed by the same firm. Space is given here to two views in order to illustrate, through comparison with the newer machine, the advance which has been made in the designing machine of this class.



AN EARLIER FORM OF RUBBER WASHER.

THE estates acquired by the recently organized Sumatra-Deli-Rubber Estates, Limited, in eastern Sumatra, embrace 132,835 rubber trees six years old and over that are being tapped for the first time this year and are expected to yield a pound of rubber on an average.

THE United States consul general at Boma reports that the condition of trade on the upper Congo is simply that of barter. "The state and many of the concessionary companies make payment in salt and in 'mitakos'—i. e., brass rods about 6 inches in length, regarded in bartering as possessing a value of 10 to the franc [=103 cents]. There is, however, a certain amount of cotton cloth used."

Progress of Rubber Planting.

PROFITS OF THE VALLAMBROSA ESTATE.

VALLAMBROSA Rubber Co., Limited, was registered April 22, 1904, at Edinburgh, Scotland, where the company's offices are now located, at 123 George street. The capital authorized is £100,000 [= \$201,000]; the shares issued to date amount to £50,000 [= \$201,000]. The company was formed to acquire and amalgamate three privately owned estates in Selangor, Federated Malay States, the vendors accepting in payment £45,000 [= \$218,002.50] in the company's shares, and £5,000 [= \$27,252.40] was subscribed for the purposes of the company.

At the end of the business year (March 31, 1907) the company had under rubber 1226 acres, and planting has been continued since. During the year the trees on 930 acres [= 1½ square miles] were tapped, the trees ranging in age as follows: 150 acres planted in 1868; 560 acres in 1869-1900; 203 acres in 1900-01; 8 acres in 1902. The yield of rubber was 150,922 pounds, or 168 2-3 pounds per acre. Of this yield 153,358 pounds came from 147,101 trees; the balance of the crop was obtained from trees cut out for thinning. The amount realized was £40,255 [= \$195,000.90], or an average of about 5s. 1½d. [= \$1.24 2-3] per pound. The cost of tapping, packing, and transportation was 1 shilling per pound. After deducting from revenue the cost of maintenance of the non-bearing rubber, etc., the profit on the year's working amounted to £30,240 18s. [= \$147,163.32]. A dividend was declared of 55 per cent., which absorbed £27,830 [= \$135,434.70]. The remainder went to reserve, after providing for directors' fees.

During the year ending March 31, 1906, the light tapping of 68,235 trees yielded 30,113 pounds of rubber, which realized £10,745. No dividend was paid for that year, but the profit and loss account showed a credit of £4767. It is expected that this year's rubber crop will reach 215,000 pounds. The London *Financial News* reports that Vallambrosa shares have changed hands lately as high as £12s. 6d. [= \$46.84] for £1 shares, which would give a stock exchange valuation of over \$2,271,104 to the total issue of shares.

ANOTHER MALAY STATES SUCCESS.

HIGHLANDS and Lowlands Pará Rubber Co., Limited, in Federated Malay States. Acreage in rubber, 2091½. Trees tapped in 1906, of different ages, 78,513—some once, some twice, and some three times. Yield of rubber, 134,285 pounds. Yield of 807 nine year old trees, 5742 pounds; average 7.01 pounds per tree. One of the estates, with 33,097 trees tapped three times and 4672 younger trees tapped lightly, once yielded 95,333 pounds. The labor cost for tapping on this estate was equivalent to less than 10 cents (gold) per pound; tapping cost, including equipment, 10½ cents. Average realized for 134,285 pounds, allowing for loss in weight, commissions, and sale charges, slightly over 5s. 2½d. [= \$1.26½]. Total profit £34,109 [= \$166,101.45]; disbursed in dividends, £25,150; rate, 11 per cent. on the paid up capital.

RUBBER RESULTS IN TRINIDAD.

Four estates are mentioned as producing *Castilloa* rubber on a commercial scale on the islands of Trinidad and Tobago, forming the crown colony of Trinidad in the British West Indies. They are: (1) *Monte Cristo*, owned by H. Monceaux, in Trinidad; (2) *Tobago*, owned by Adrien De Verteuil, Trinidad—last shipment, 1145 pounds; (3) *Richmond*, owned by Captain Short, Tobago; (4) *Louis D'Or*, owned by a company, T. L. M. Orde, manager, Tobago—last shipment over 1200 pounds. The first two named companies are of French origin, and make shipments to Paris; the other two ship to London. Recent shipments to

London of *Castilloa* sheets dried and pressed into blocks brought 4s. 4d. [= \$1.05½] per pound. THE INDIA RUBBER WORLD is informed that several other estates, with 10,000 to 30,000 rubber trees each, will be coming into production annually.

RUBBER PLANTATION IN COLOMBIA.

KAY THOMSON writes to the *Journal* of the Jamaica Agricultural Society from "The heart of Colombia" that the small plantation of "virgin rubber" (*Sapium*) formed there by his father twenty years ago has been sold to a syndicate for £20,000. The plantation is producing rubber now, and some of the rubber stripped from it is reported to have sold at "almost 8 shillings" a pound.

RUBBER PLANTERS AND PLANTATIONS.

At the annual Agri-Horticultural Show, at Kuala Lumpur, in the Federated Malay States, which was opened on August 9, a number of prizes were offered for plantation rubber, in various classes. Twelve silver cups were offered.

The number of shareholders in the rubber planting companies registered in London is estimated by *The Financier* at 25,000, the bulk of whom live in the United Kingdom.

Borneo-Kautschuk-Compagnie, A.-G., of Berlin, with an authorized capital of 2,000,000 marks [= \$476,000], of which 532,805 marks has been paid in, are participating in the Dutch Borneo Rubber Co.

Mr. Gordon Waldron, of the "Cukra" rubber plantation, near Bluefields, Nicaragua, has had built, for navigating local waters, a steamer constructed entirely of woods cut from the Cukra property, with the exception of the engines and boiler, which come from Chicago. The wood was all sawed by the plantation sawmill. The steamer is named the *Cukra*, and is 80 feet in length over all, and 16 feet beam.

Dr. John C. Willis, director of the Ceylon royal botanic gardens, in his administration report for 1906, estimates the area of rubber under cultivation on that island at the end of the year at 115,000 acres.

The father of Mr. J. B. Carruthers, director of agriculture in the Federated Malay States—Dr. William Carruthers, F. R. S., of England—has received the honorary degree of PH. D. from the noted Upsala University, in Sweden.

The *Gummi-Zeitung* reports the shipment during August, by the steamer *Markgraf*, from German East Africa to Germany, of about 8500 pounds of plantation rubber, valued at about 30,000 marks [= \$7140]. This our contemporary regards as proof that rubber culture in German Africa is making real progress.

The patents on the rubber tapping tool invented by Mr. C. A. Lesher, manager of "La Zacualpa" rubber plantation in Chiapas, Mexico [see THE INDIA RUBBER WORLD, April 1, 1907—page 219] have been transferred to the La Zacualpa company, and they are not selling the tools.

While a clearing was being burned on the estate of the Isthmus Plantation Association of Mexico, at Del Corte, fire spread to the growing rubber, destroying a considerable number of trees and scorching about 400,000, which it was decided at first would sprout up again. Later the company concluded to replant the whole burned district. Some 251,700 of the older trees were untouched.

Continental Commercial Co. (St. Louis), in a recently issued bulletin, report growing on their estates in Mexico 427,344 rubber trees, in addition to large plantations of coffee and sugar.

Exports of rubber from German East Africa in 1905 included 5250 kilograms [= 11,550 pounds] of cultivated Ceara rubber, or *Manihot Glaziovii*, from the plantation at Lewa of the Deutsch-Ostafrikanische Plantagen-Gesellschaft, A.-G., of Berlin.

Crude Rubber Interests.

THE NEW RUBBER FROM BAHIA (BRAZIL).

A RECENT visit by Mr. Ashmore Russan, an English authority on South American rubber fields, to the interior of the Brazilian state of Bahia, for the purpose of studying some recently discovered forests of "manigoba" rubber, forms the subject of an entertaining series of letters he has written for *The Financier*, of London. Three years ago the United States consul at Bahia city, referring to this new source of rubber, wrote: "The area is said to be very large, but cannot be defined, as the region has not been fully explored." As early as 1899 the British consul at Bahia had reported that large tracts of forest with an abundance of rubber trees were reported to exist in the interior of the state, "but unfortunately, owing to the difficulties of transport, through a country without roads, this source of riches is unavailable." Now, however, the collection of rubber has been actively developed in the country referred to, with the result that the production of the grade known commercially as "manigoba" has been greatly increased.

Bahia, an Atlantic seaport of Brazil, has long been a shipping point for rubber, but not until recently have her exports included very much "manigoba," that grade having been derived chiefly from Ceará, for which reason it is known widely as "Ceará rubber." The following official figures indicate the growth in the total exports of "manigoba" from Brazil, for several years past, and also the share coming from Bahia port, the figures expressing weights in kilograms:

YEAR.	Total Manigoba.	From Bahia
1901.....	472,917	23,676
1902.....	807,388	143,041
1903.....	1,721,864	496,224
1904.....	2,226,977	939,157
1905.....	2,682,217	1,443,826
1906.....	2,664,000	1,410,000

From what Mr. Russan observed there appears reason to look for a continued increase in the output of rubber of this grade, and particularly from Bahia, not only from the native trees, but as a product of cultivated plants. Mr. Russan's travels took him into the heart of the adjacent districts of Maracas and Jequie, in the south part of the state of Bahia. Starting from Bahia port by steamer, he spent a half day reaching the head of navigation on the river Paraguassu. Next he traveled 186 miles on the Bahia Central railway, stopping at Tambury, whence he traveled on horseback for a hundred miles or more into the rubber country. Tambury sends to market 250 to 300 tons of rubber a year, and all the neighboring villages are centers of rubber interest. The farthest point reached was Porto Alegre, on the Rio de Contas, through which place 500 tons of rubber pass annually.

Unlike rubber trees elsewhere those in southern Bahia cover the ground, instead of being scattered here and there among various other growths. When the ground is cleared of everything but "Manigoba" rubber, 100 or more trees remain to the acre. Mr. Russan found millions of these trees, prolific of rubber of good quality, but everywhere the story he heard was the same—the lack of capital to employ labor to work the rubber. There is also the matter of transportation to be improved. Mr. Russan saw rubber conveyed to the railway stations by trains of pack mules, each group carrying a ton. It may be added that Maracas is a political division of Bahia, "as large as four English counties," with a town of the same name for its capital. Jequie is the name of a river flowing into the Atlantic. This name has been applied more particularly to the rubber produced in southern Bahia.

It appears that the tree yielding new rubber from Bahia differs from the tree known as "manigoba" in the state of Ceará, lying

considerably to the north of Bahia. The Ceará tree has long been known to botanists as *Mauhat Glaziovii*, and this is the species which has been planted extensively in Africa and the Far East. Compared with the *Mauhat Glaziovii*, the Jequie rubber tree has a slightly different flower, although the leaves are similar, and very much larger seeds; the latex flows much more freely and is more abundant; and, finally, the rubber product is superior. The "spiral" tapping system invented in Ceylon, it is stated, has been successfully applied to the Jequie tree.

Lieutenant Colonel Prain, director of the Royal Botanic Gardens, at Kew, stated recently at a meeting of the London Society of Arts, that the "manigoba" tree reported to be cultivated in South America was not the same as the tree yielding Ceará rubber. The best authorities in Brazil seem agreed that this is true.

THE MEXICAN "YELLOW TREE."

INTEREST continues to be expressed in the tree known locally in Mexico as "el palo amarillo" (the yellow tree), described as an inferior rubber producer in THE INDIA RUBBER WORLD February 1, 1906 (page 148). The botanists have had the usual difficulty in fixing a scientific name to this tree. In 1905 it was designated by a Mexican scientist the *Euphorbia elastica*, but that name happened to have been applied a few months earlier by a Frenchman to a Madagascar rubber plant. Otto Stapf writes in the *Kew Bulletin*: "The Mexican plant had therefore to receive a new name and, as 'Amarillo' corresponds to the Latin 'fulvus,' I propose for it the name *Euphorbia fulva*." It does not appear that any process has been discovered to render the rubber from this tree commercially valuable, but the oil obtainable from the seeds is referred to as a valuable by-product.

EXPORT DUTY ON CONGO RUBBER.

THE governments of the Congo Free State, Portugal, and the French republic, under the terms of the protocol of April 8, 1902, continued without revision until now, have agreed that the levying of the export duty on crude india-rubber shall be on the basis of an official value of 6 francs a kilogram [=52½ cents a pound], instead of 4 francs, as before. A decree of the king-sovereign of the Congo state, dated July 2, 1907, fixes the export tax on rubber from that state at 10 per cent., or 60 francs per 100 kilograms [=5½ cents a pound].

ADULTERATION OF NIGERIA RUBBER.

THE last yearly report of the high commissioner of Northern Nigeria, in West Africa (Sir Frederick Lugord), says: "Rubber formed nearly three-fourths of the total value of the exports for the year, but I fear that this increase has been obtained at the cost of a considerable destruction of the rubber vines by the senseless process of digging up the roots, from which a very low grade rubber is prepared. Not only are the sources of supply thus permanently destroyed, but the product is so full of impurities (67 per cent. I am told consists of bark and dirt, while other samples are even worse, and not fit for export at all) that it is to be feared that Nigerian rubber will obtain a bad name in the market, which it may hereafter be difficult to remove. This result has, I believe, been largely due to the competition between European firms, which has resulted in the purchase of rubber filled with bark and impurities, which formerly was unsalable."

BRIEF MENTION.

THE total production of "mangabeira" rubber for several years past has shown a decline. The exports from the state of Sao Paulo have been: 128,991 kilos in 1904; 95,190 kilos in 1905; and 88,535 kilos in 1906. Other statistics of mangabeira rubber appeared in THE INDIA RUBBER WORLD July 1, 1907.

The annual report of the Mogyana Railway and Navigation

Co., in the Brazilian state of Sao Paulo, for 1906, includes among the items of freight transported, 204,004 kilograms of rubber.

Rubber Concessions, Limited, is the name of a company registered in London August 27, 1907, with £5000 [= \$24,332.50] capital, to purchase a concession for the collection of rubber and for other purposes in Ecuador. Registered office: 45 Leadenhall street, E. C., London.

The government of Guatemala has granted a concession to José Weir for cutting timber and gathering india-rubber and chicle gum, in the department of Patén during a period of 5 years.

The Mexican Chicle and Mahogany Co., controlling 550 square miles of lands in the territory of Quintana Roo, in the eastern part of the Yucatan peninsula, have shipped to their property a sawmill said to have a capacity for sawing 1000 trees per day. Their forests, said to be the richest in Mexico, are convenient to Vigia, from which port boats reach New Orleans in 2½ days.

THE COTTON CONFERENCE.

THE International Cotton Conference to be held at Atlanta, Georgia, on October 7-9, will be attended by delegates from practically every foreign country in which American cotton is used in manufacturing goods. The foreign attendance is expected to number about a hundred, and will embrace a number of distinguished persons. The American attendance will include representatives of the leading organizations of cotton growers and cotton spinners.

The object is mutual benefit. *The Cotton Journal*, of Atlanta, published in the interest of the growers, says: "The main object is to uncover and expose to the growers the principal abuses which have so long existed in the handling of American cotton and to encourage needed reforms. These reforms can only be put into operation through the adoption of improved methods in baling, covering, warehousing, handling and delivery of American cotton in the ports of foreign countries. The leading spinners of the world will be present at the conference and tell out of their own mouths to the South's representative growers the abuses which exist in the American cotton trade and offer suggestions as to how best to bring about the desired reforms. The farmers of the South grow the cotton fiber which the world must have and the spinners and weavers manufacture it into the finished fabric. These interests are in a great measure interdependent, and it is right and proper that they should come together and coöperate for the purpose of mutual benefit. The question of prices will probably never be discussed by growers and spinners in joint conference because this is one feature of the cotton trade about which both sides could never agree satisfactorily, but there are dozens of other matters of mutual concern which are vital to the interests of both."

The promoters of this conference look forward to the time when raw cotton will reach the manufacturer in better condition than now, and by methods involving less cost than now. Under the hoped for new régime, it would be possible for the planter to realize better prices per pound than at present, while the spinner would be getting more cotton per dollar expended than he now gets. It is felt, therefore, that the move will become popular alike with the producers and consumers of cotton.

Arrangements have been made to give the foreign delegates to Atlanta a comprehensive view of American life, including a tour of the leading cotton growing States. They are expected to remain in the country for nearly a month.

THE SEA ISLAND COTTON CROP.

JOHN MALLOCH & Co., of Savannah, report: "The coming crop is undoubtedly in better condition at this time than ever before. There is an increase of about 12½ per cent. in acreage, and with an average fall we see no reason why there should not be 100,000 bales made. In the face of this large crop and the example

that consumers can get along with a very small amount of Sea Island cotton, viz., 50,420 bales, we are surprised to find the interior rather bullish." The last crop (1906) was only 58,932 bales. The crop for 1905 was 123,780 bales.

A NEW COTTON DUCK MILL.

ORGANIZED with a capitalization of \$500,000, the National Duck Mills of Atlanta, Georgia, began operations about the middle of September with a daily output of from 5000 to 10,000 pounds of the best grade of double or twisted cotton duck. The old plant of the Southern Rug and Carpet Mills has been leased for a long term of years. The officers of the new corporation are as follows: President and treasurer, George P. Howard; vice-president, James P. Escott; secretary and manager, W. L. Byer.

COTTON PICKINGS.

THE *Cotton Journal* (Atlanta, Georgia), the organ of the cotton planting interest, deliberately commits itself to the prediction that next season the price of spot cotton will reach 15 cents a pound, middling basis, at all interior points in the South.

Bradstreet's says: "All the mills have sold their product so far into the future, in order to satisfy the insistent demand, that they have been placed in an extremely independent position in regard to both price and delivery, and cotton goods on spot are almost impossible to obtain at any price, however high."

Colonel William F. King, superintendent of the New York Cotton Exchange, figures the last cotton crop in the United States at 13,539,948 bales, against 11,233,847 for the previous season. The last crop has been exceeded in size but once—13,054,029 bales—in 1904. The *New York Financial and Commercial Chronicle* estimates the last crop at 13,550,760 bales.

The Madero brothers, whose interest in guayule rubber has been referred to in these pages, are likewise interested considerably in growing cotton. On one day recently they despatched 100 cars loaded with cotton by the Mexican Central Railway, for export to the United States.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of July, 1907, and for the first seven months of five calendar years:

MONTHS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
July, 1907.....	\$132,686	\$213,471	\$337,784	\$683,941
January to June..	663,279	480,604	2,015,086	3,158,969
Total	\$795,965	\$694,075	\$2,352,870	\$3,842,910
Total, 1906.....	663,536	615,154	1,803,512	3,082,202
Total, 1905.....	637,102	588,309	1,671,076	2,896,487
Total, 1904.....	504,666	472,128	1,382,582	2,359,376
Total, 1903.....	474,684	341,792	1,459,954	2,276,430

A FEW NOTES.

THE exports and imports of india-rubber goods by Australia for two calendar years, as compiled from official sources by Special Agent H. K. Burrill, of the United States bureau of manufactures, were as follows:

	1905.	1906.
Imports, value	\$1,391,176	\$1,000,597
Exports, value	126,757	161,426

British South Africa in 1906 imported india-rubber goods valued at \$118,098, of which Great Britain supplied \$89,011 and the United States \$16,284.

Tenders were invited recently by the Egyptian war department for the supply of 3,500 india-rubber sponges.

CAMPHOR growing is being experimented with at the Batu Tiga experimental gardens, in the Federated Malay States, in charge of Mr. Stanley Arden, who predicts good results.

RUBBER INTERESTS IN EUROPE.

TRANSFER OF AN OLD ENGLISH FACTORY.

A NEW company under the style Broadhurst & Co., Limited, was registered August 6 to acquire the business carried on hitherto by a company of the same name, now in liquidation. The business was founded originally about 1870, and consisted in the manufacture of mechanical rubber goods, at Bradford, Manchester. In 1901 it was converted into a public company; later, on becoming embarrassed, the business passed into the control of the company's creditors, and was continued by them. The capital of the new company is £40,000. The first directors are F. H. Smith and P. A. Birley, the latter of Charles Macintosh & Co., Limited, of Manchester. The impression exists that the Messrs. Macintosh own the works.

MURAC AGAIN.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In printing in your August edition (page 349) our letter of June 15, we note that you have in error used the word "books" instead of "works," as written by us. We are always willing to allow any india-rubber manufacturer to inspect our Murac works, but we do not undertake to disclose our books.

The error, though seemingly small, may be understood and possibly lead to some confusion, as we have a large number of shareholders.

THE BRITISH MURAC SYNDICATE, LIMITED,
MORLAND M. DESSAU, Manager.

London, August 20, 1907.

GREAT BRITAIN.

At a meeting of the Single Tube Tyres, Limited (London), it was decided to go into liquidation. Early in 1898 the B. F. Goodrich Co. and two other American rubber firms formed a company for the joint exploitation of single tube bicycle tires in Europe, under the style, The Single Tube Tyre Co. The other companies in time retired from the field. The B. F. Goodrich began doing business under their own name, and the tire exploiting company, in new hands, became The Single Tube Tyres, Limited—the company now giving up its existence.

The de Nevers Rubber Tyre Co., whose works at Earlfield, near London, were visited by a serious fire on May 9, are about getting in good running order again.

The directors of W. T. Henley's Telegraph Works Co., Limited (London), declared an *interim* dividend for the first half of the business year, payable September 2, at the rate of 4½ per cent. on the preference and 10 per cent. on the ordinary shares—the same rate as last year.

FRANCE.

THE capital of the Société anonyme des anciens Etablissements J. B. Torrilhon has been increased from 4,000,000 francs to 6,000,000 francs [\$1,158,000], by the issue of 20,000 shares of 100 francs [= \$19.30] each. Their factories, devoted largely to producing tires, are at Chamalières, near Clermont-Ferrand.

The profits of the Etablissements Hutchinson for the last business year reached 1,413,075 francs [= \$272,723.48], an increase over the preceding year of 416,637 francs. The amount set apart for share dividends was 804,090 francs [= \$155,180.37]. The share capital is being increased from 5,000,000 to 6,000,000 francs [= \$1,158,000], by the issue of new 300 franc shares.

GERMANY.

A NEW company, Deutsche Kautschuk-Werke G. m. b. H., has been formed with 400,000 marks [= \$94,200] capital, at Wilster, in Schleswig-Holstein. The director is Georg Ferdinand Bogel, with a counsel of associates. The company have acquired and will exploit the patent of Dr. Foelsing and Herr Bogel for extracting rubber by mechanical and chemical means from various plants and plant products. Of the capital, 70,400 marks is subscribed by Weber & Schaer, crude rubber merchants at Hamburg; 70,300 marks by the Kautschuk-Pflanzung "Meinje" A.-G., of Berlin; and 10,000 marks each by Messrs. Foelsing and Bögel.

New York-Hamburger Gummwarenfabrik G. m. b. H. has increased their capital by 200,000 marks, making a total of 2,000,000 marks [= \$470,238].

The capital stock of the Radum-Rubber-Compagny, m. b. H., at Dellbrück near Cologne, has been increased from 900,000 to 1,700,000 marks [= \$386,668].

Herr Emil Spangiel, director of Vereinigte Berlin-Frankfurter Gummwaren-Fabrik (Berlin), spent his summer vacation at Interlaken, Switzerland, whence he sent THE INDIA RUBBER WORLD a picture of the peak gummhorn, or "india rubber horn," which overtops the lakes there.

BELGIUM.

LA Société Belge pour la Fabrication des Câbles et Fils Electriques, offices 37, rue St. Léonard, Brussels, and works at Baysinghen have been increasing their capital to 500,000 francs [= \$96,500].

SWEDEN.

THIRTEEN hundred employees of the Aktiebolaget Svensk-Fuge'ska Gummfabriken, at Malmö, were reported on strike lately, most of them being women employed in making gaskets. It was expected that the company would be able soon to resume work.

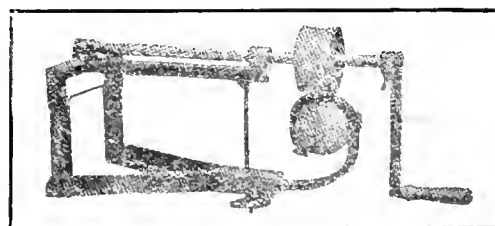
Aktiebolaget Långt Mann's Kautschukplantage has been organized at Malmö, to acquire the plantation of Oscar Richter on the east coast of Sumatra and extend the planting of rubber. The capital is 205,000 *kr.* [= \$71,020], with authority to increase to 600,000 *kr.*

MILKING MACHINES IN ENGLAND.

AT the last Royal Agricultural Show in London several makes of milking machines were shown, and it was evident from the attention given to them that the interest in this new form of labor saving device for the dairy, referred to in THE INDIA RUBBER WORLD for September 1 (page 383), is becoming considerable in Great Britain. King Edward is referred to as having watched the working of the "Hartnett" patent milker, invented in Australia, where several hundred are reported to be in use. In this machine the pulsator is fixed overhead, instead of to the milking cans, where it would be liable to be kicked over by restive cows.

The "Wallace" milker, made in Scotland, had already won a silver medal awarded by the Royal Agricultural Society of England. The different machines shown each possessed some distinguishing feature, though all work so nearly on similar lines that detailed illustrations would be necessary to make the differences clear to the reader. The subject is mentioned here because the development of cow milkers seems to have reached a practical stage, and one that will call for a considerable amount of high grade rubber tubing and carefully made fittings of rubber.

MR. HERBERT WRIGHT has been awarded a silver medal by the London Society of Arts for his recent lecture on "Rubber Cultivation in the British Empire," reviewed in THE INDIA RUBBER WORLD, July 1, 1907 (page 307).



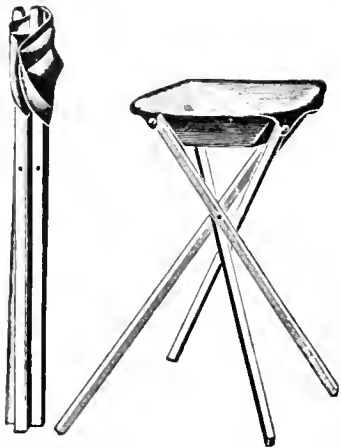
MILLER'S TIRE TREAD ROLLER.

[For rolling down unvulcanized rubber, when making section repairs or re-covering. Operates more rapidly than the ordinary hand roller, besides rolling the rubber and cloth more tightly together. Charles E. Miller, Anderson, Indiana.]

New Rubber Goods in the Market.

"RACINE" WASH STAND.

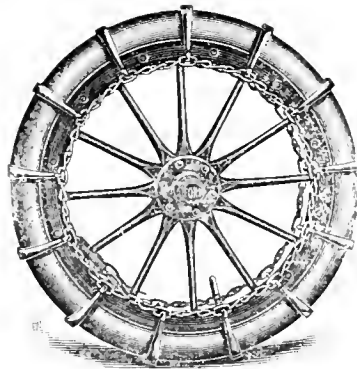
ONE of the appointments of camp life that approaches luxury is the "Racine" wash stand. Perhaps one of the most perplexing of the minor problems that the camper has to contend with is that of the bath appliances. In the folding rubber wash stand this problem seems to have been solved and solved satisfactorily. It is sanitary; it is convenient. What more can one ask for? When folded it is two inches square and three feet long, quite capable of being stowed away in some corner when not in use, and of very little additional weight or inconvenience to carry in addition to the camping outfit. The frame is of hard wood and the bowl is heavy rubbered duck—an ideal combination. [Gold Medal Camp Furniture Manufacturing Co., Racine Junction, Wisconsin].



"RACINE" WASH STAND.

AUTOMOBILE CLIMBER.

THIS is a non-skidding device designed to work in sand, snow, mud or ice, and to climb any hill if the machine has the power to turn the wheels. It can be adjusted to any tension on the wheel with the ratchet lever clutch, without inflating the tires. Few autoists have escaped the experience of being caught out in the rain and finding the roads in such condition that the machine could not be moved, or of having to go miles out of the course to follow the way of least resistance, and this because of sandy roadbeds. The Automobile Climber when attached to the rear wheels of the machine or truck prevents slipping or sliding on any kind of road. It can be attached in a few moments. Two chains are used on each wheel and these chains are so connected with the clip, that when attached they hold the chains clear from the spokes and rim of the wheel, and they are formed to fit the tire in such a manner that when the weight is put on the clip the tire is allowed to spread, thus making it run smoothly over hard roads or pavement. The clips are made larger than the tire so as not to rub the sides of the tires when they spread from the weight of the machine, causing rough running. [J. C. Brown Manufacturing and Garage Co., Butler, Indiana.]

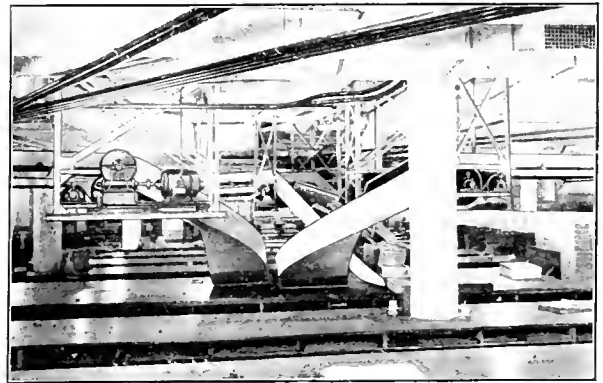


AUTOMOBILE CLIMBER.

BELT CONVEYORS FOR STORES.

THE principle of the rubber belt conveyors now so generally used in the handling of heavy commodities on a large scale, as in mining, manufacturing, and the movement of freight, has now been adapted successfully to the business of large department stores. In such a store in New York four Robins' belt

conveyors have been installed, especially designed for transmitting packages from the various floors and departments to the wrapping and shipping department in the basements, whence they are transferred to the delivery wagons to be carried to the homes of the purchasers. Three of the conveyors referred to are "troughed," the belts being 30 inches in width and 71, 92, and 101 feet in length, respectively. The fourth has a flat belt, 75



BELT CONVEYORS IN A DEPARTMENT STORE.

feet long and 30 inches wide. The belts are driven electrically. The illustration shows the central discharging point of the three conveyors which work in one system, and also one of the driving motors. The conveyors, of course, are installed in the basement, and are reached from the upper floors through numerous spiral chutes, or "helical gravity tubes," through which the goods may be dropped safely. [Robins Conveying Belt Co., Park Row building, New York.]

THE POCKET ICE APRON.

THE various inconveniences that result from the delivery of ice in households and in business places have led to the bringing out of the invention here illustrated. The wet from the melting ice is caught in the pocket of the apron, and not in the iceman's clothing and shoes, or all over the customer's floors in muddy pools. The man who delivers ice, by the use of this apron, may keep himself as dry as if he were delivering groceries. The burden comes on the man's back instead of on his stomach, and is much more easily carried. The Pocket Ice Apron is the invention of Edwin W. Fletcher, of Worcester, Massachusetts, and it has met a wide sale already in New England, which is extending rapidly throughout the country. It has been purchased by Albert H. Bloss and Isaac Crocker, of the "Crocker rubber stores," who have organized a new corporation for exploiting it. [The Pocket Ice Apron Co., Providence, Rhode Island.]



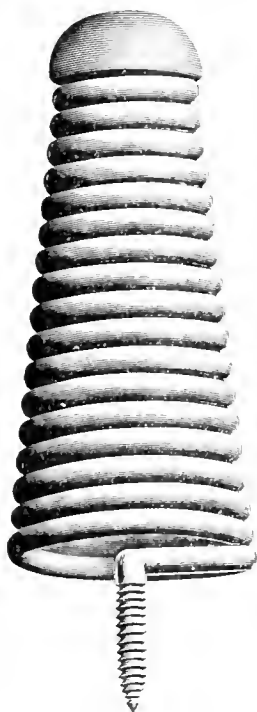
POCKET ICE APRON.

"MIDNIGHT" OIL PROOF PACKING.

THIS is a rubber packing, yet is used to pack oils. It is jet black, with a highly polished surface, which renders it impervious to oil and steam. It is specially made to pack joints in oil lines and steam joints where some other packings would be decomposed by lubricating oils. It is made in sheets 36 inches wide, in rolls weighing 100 pounds. It is stated that oil and steam hose may be lined with "Midnight" stock with good results. [Osgood Sayen, 421 Arcade building, Philadelphia.]

FLEXIBLE DOOR BUMPER.

By the use of a simple invention, that of a single wire coiled in the proper form, the banging of doors and the marring of walls becomes an impossibility. As the illustration shows, one end of the wire is threaded, forming a screw for its attachment to the door, while the other end, which is slightly tapering, is finished with a rubber cap. As there are no metal rivets or screws in the rubber attached, it is claimed that it will last for an unusually long time. Then, the flexibility of the spring relieves the rubber somewhat, adding to its possibilities of longevity. The mere thought of the noiseless swinging back of doors brings a sense of rest, and the reality is sure to be a boon to people who are "conscious of nerves," as well as to those who deplore the disfiguring results on walls. These bumpers are made in all the regular hardware finishes from ebony black to antique brass. [The Shelby Spring Hinge Co., Shelby, Ohio.]



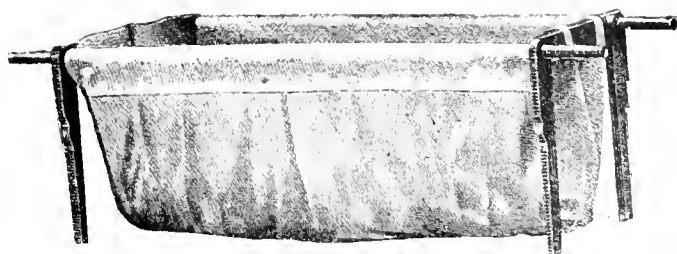
FLEXIBLE DOOR BUMPER.

RUBBERTEX—A WATERPROOF CLOTH

THE name "Rubbertex" has been applied to a new line of textile products, resulting from a water proofing process which involves no use of rubber. Space is given to the subject in these pages because the goods referred to are offered to the trade as a substitute for rubber factory products, and they seem to have stood the test of time satisfactorily. Cotton or other fabrics are used as the basis for "Rubbertex," being treated with a peculiar petroleum product, in such way as to render the material waterproof, while leaving it pliable. As will be inferred from this description, "Rubbertex" is not injured by contact with oils. This material has been used with success for machinery belting, for which purpose it is not injured by outdoor exposure. In fact, a mill in Wisconsin is mentioned at which "Rubbertex" belting has been used for months under water. The same material, prepared under a somewhat different process, is used for steam and cold water packing. Other uses are roofing, carriage and wagon tops, tarpaulins, horse blankets, fertilizer and cement bags, and so on. An advantage referred to in connection with "Rubbertex" roofing is that no paint is used in laying it. The manufacture is protected by United States patent No. 820,604, issued May 15, 1906, to Lon A. Bond. [Rubbertex Cloth and Paper Co., Logansport, Indiana.]

A RUSSIAN FOLDING BATHTUB.

THE illustration herewith relates to a folding bathtub made by the Russian-American India-Rubber Co., at St. Petersburg. It



RUSSIAN FOLDING BATHTUB.

is made in larger sizes than are usually seen in America, and in more durable form. The supporting device, simple in construction, is also durable.

SPENCER TURBINE CLEANER.

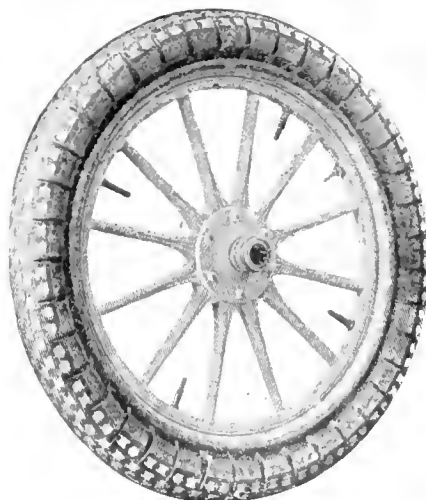
THIS cleaner is a powerful air pump, without pistons or valves or connected mechanism of any sort, and is operated by an electric motor or any other available power. The tools used in cleaning are wide slotted and by the large volume of air drawn through them all the necessary force is acquired to take up the accumulation of dust on carpets, rugs, or upholstery, without injury to the textile. In sweeping carpeted or wood floors and for various other forms of cleaning there is employed in the Spencer system a cleaning tool having a slot 20 or 30 inches in length and 1/8 of an inch in width. Using such large orifices in its tools it can take up larger objects and therefore has a wide range of utility as well as expeditious method. Its capacity is not limited to carpeted buildings, but it can be used with an equal degree of efficiency in the factory, printing office, and the like, and is as successful in extracting the dust from the floor of a car as it is in removing it from its cushioned seats. The dirt and dust so extracted is deposited in a spacious drawer in the machine which may be emptied in a moment. In installing these cleaners they are put in the basement, preferably with one or more pipe risers, provided with inlet-valve hose connections to connect with all parts of the building. But small space is required for their installation and they do not require an experienced operator. The amount of power necessary for operation is comparatively slight, and they are designed for use from day to day in place of the ordinary mop and broom, and not for an occasional housecleaning. [The Spencer Turbine Cleaner Co., Hartford, Connecticut.]



SPENCER TURBINE CLEANER.

"MAPLEBAY" AUTOMOBILE TIRE COVER.

A NEW tire cover made of waterproof leather that will not shrink or harden is shown in the illustration herewith. The tread fastens to the rim of the wheel by means of flat metal hooks,



"MAPLEBAY" TIRE COVER.

and it is claimed to increase the life of the tire four-fold, these hooks or clips serving to prevent a large percentage of the punctures. The attachment is neatly made, the clips going under the edge of the clincher. This cover is made to fit any standard tire on the market. [Maplebay Manufacturing Co., Crookston, Minnesota.]

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JULY 30, 1907.

NO. 861,337. Hernial truss. J. W. Banker, assignor to Bunker Truss Co., both of New York city.

861,377. Pneumatic dental cement injection. H. I. Cruttenden, Northfield, Minn.

861,390. Hose coupling. W. H. Mack, Wilkinsburg, Pa.

861,349. Apparatus for treating the scalp. [Embracing a helmet, inflatable tube, etc.] R. E. Beaubien, assignor to H. F. Hanson, both of Chicago.

861,386. Stopper for water bags and the like. J. Nuttall, Bridgeport, Conn.

861,434. Pneumatic tire [with plurality of inner tubes]. T. J. Chatham and J. S. Holliday, both of Turlock, Cal.

861,436. Combination voice extension attachment. [A form of dental plate.] J. N. Courtney, Salt Lake City, Utah.

861,528. Floor washer. A. Lord, Lynn, Mass.

861,542. Wheel. [With solid rubber tire.] B. C. Seaton, St. Louis.

861,545. Lawn hose support. F. H. Smith, assignor to G. S. Batty, both of Los Angeles, Cal.

861,597. Manufacture of gaskets. J. Merritt, assignor of one-fourth each to W. A. Lorenz and W. H. Horniss—all of Hartford, Conn.—and one-half to Beech Nut Packing Co., Canajoharie, N. Y.

861,620. Exercising machine. J. E. Thompson, Worcester, Mass.

861,623. Wheel. [With cushioning springs at the rim, covered by a rubber shoe.] W. H. Trahue, Montvale, N. J.

861,697. Device for attaching rubber disks to bottle stoppers. H. N. and G. F. Balcom, Chicago.

861,819. Discharging apparatus for belt conveyors. Thomas A. Edison, Llewellyn Park, N. J.

861,851. Electrical heater for hot water bags. C. Van D. Hill, St. Louis.

862,045. Hose or pipe coupling. S. O. Barnett, Newark, N. J.

862,063. Vehicle wheel. [With a tire, a hub, and resiliently mounted spokes.] J. F. De Jarnette, assignor to Eby Mfg. Co., Omaha, Neb.

862,070. Adjustable friction belt for automobile tires. E. Grieder, assignor to E. J. Cole, both of Woodbine, Iowa.

862,101. Hair drying comb. P. E. Oswald, assignor to H. N. Wayne, both of Los Angeles, Cal.

Reissue.

12,628. Abdominal support. Nellie L. Digney, Bridgeport, Conn. Original No. 812,120.

Trade Marks.

The B. F. Goodrich Co., Akron, Ohio. The following, for marking the kinds of goods specified:

28,488. The head of a goat. For hose.

28,480. The word *Rock*. For hose.

28,490. A pair of winged wheels running over a trestle. For hose.

28,491. The word *Torrent*. For hose.

28,492. The word *Whirlpool*. For hose.

28,493. The word *Artesian*. For hose.

28,494. The word *Tidal*. For hose.

28,495. The word *Florist*. For hose.

28,496. The word *Atlas*. For hose and packing.

28,499. The word *Signal*. For packing.

28,500. The word *Mainstay*. For packing.

28,501. The initials *R. F. G.* For packing.

28,502. The word *Goodrich*. For tires.

28,504. The word *Anchor*. For pencil erasers.

28,505. The word *Manyfold*. For pencil erasers.

28,511. The word *Princess*. For syringes.

28,512. The word *Empress*. For syringes.

ISSUED AUGUST 6, 1907.

862,148. Carriage. A. Litalon, Montreal, Quebec.

862,197. Truss. E. H. Parker, Chicago.

862,218. Piston and piston ring. C. A. Smith, Elgin, Ill.

862,230. Pressure retaining valve for airbrake. C. L. Udegraff, West Fairview, Pa.

862,266. Filter for dust suction apparatus. A. Mestitz, Raudnitz, Austria-Hungary.

862,336. Hose coupling. A. R. Robbins, Oceanpark, Cal.

862,337. Drying machine. L. W. Agar, Ludlow, Vt.

862,338. Statue. A. Hoff, New York city.

862,339. Toy machine and car. G. Lamon, Washington, D. C.

862,340. Airshiping device. W. L. Portree, Birmingham, England.

862,342. Tangle only for airbrake. W. E. Mann, Baltimore, Md.

862,347. Rectal injection apparatus. C. E. Quimby, New York city.

862,349. Shoe shipping machine. J. H. Wall, Bristol, R. I.

862,343. Automobile tire. A. Dometon, Marysville, Ga.

862,578. Hose coupling. K. O. Muchilberg, Homestead, assignor to Pittsburgh Hose Connector Co., Pittsburgh, Pa.

862,593. Fire hydrant. C. C. Steiner, Philadelphia.

862,592. Wheel. H. F. Broadhurst, London, England.

862,737. Atomizer. H. A. Hill and J. A. Lindstrom, Northampton, Pa.

862,748. Conveying apparatus. T. S. Miller, South Orange, N. J.

862,749. Nose clamp. M. P. McLaughlin, Wakefield, Mass.

862,763. Medicated bougie. L. Sensburg, Munich, Germany.

862,785. Vehicle tire. W. E. Andrew, Atlantic Highlands, N. J.

862,794. Facial bandage. A. L. Black, Sacramento, Cal.

862,824. Pneumatic cleaning device. L. O. Howell, assignor, by mesne assignments, to Sanitary Appliance Co., both of Philadelphia.

862,837. Truss. T. E. Martin, assignor to Flora A. M. Martin, Buffalo, N. Y.

Trade Marks.

29,984. Electric Service Supplies Co., Philadelphia. The word *Keystone*. For electric insulating material.

28,203. I. A. Harris & Brother, New York city. The word *Sirrah*. For raincoats.

28,481. The B. F. Goodrich Co., Akron, Ohio. The word *Star*. For packing.

28,498. *Same*. Outline drawing of a star. For packing.

ISSUED AUGUST 13, 1907.

862,899. Rod packing. O. J. Garlock, Palmyra, N. Y.

862,994. Pipe or hose coupling. J. H. Phillips, Jr., Jackson, Mich.

862,995. Pipe or hose coupling. *Same*.

863,013. Swimming apparatus. J. G. Baum, New York city.

863,049. Wheel. A. McLean, Brae Side, Ti Tree Point, New Zealand.

863,054. Matting. G. B. Dickerson, Westfield, assignor to New Jersey Car Spring and Rubber Co., Jersey City, N. J.

863,083. Protector for pneumatic tires for motor cars and similar vehicles. A. McLean, Brae Side, Ti Tree Point, New Zealand.

863,095. Automatic pump for rubber tires. O. D. Rousseau, Seymour, Iowa.

863,175. Induction coil. J. O. Heinze, Jr., Lowell, Mass.

863,196. Packing for piston rods. L. H. Martell, Ellwood City, Pa.

863,205. Packing. J. H. Nash and R. H. Briggs, Jr., East St. Louis, Ill.

863,206. Resilient wheel for motor cars and other road vehicles. T. Oldfield and J. A. Schofield, Halifax, England.

863,260. Brush. G. S. Butterfield, Sault Ste. Marie, Ontario.

863,306. Rubber tip for lead pencils. F. McIntyre, New York city, assignor to Eagle Pencil Co.

863,331. Antiskid device. E. B. Stimpson, New York city.

863,353. Tire tool. W. C. Broadwell, Rochester, N. Y.

863,360. Apparatus for molding golf and other playing balls. P. Dick, Edinburgh, Scotland.

863,386. Hoof pad. M. Hallanan, New York city.

863,398. Self closing clasp or cover for rubber tubes. G. Ivanoff, Moscow, Russia.

863,409. Means for packing valve rods or shafts under pressure. O. E. Leib and E. B. Witte, Trenton, N. J.

863,448. Process of making playing balls. F. H. Richards, Hartford, Conn.

863,451. Vehicle wheel. T. Rowland, Cornapolis, Pa.

863,488. Vehicle tire. J. Allend, Philadelphia.

863,523. Letter, figure and the like in relief. J. Fischer, Budapest, Austria-Hungary.

863,535. Rubber tire protector. J. Hippisley, Boston, assignor of forty-five one-hundredths to A. E. Penney, Carbonear, Newfoundland.

863,539. Wheel tire. A. J. James, Houston, Tex.

863,544. Machine for rolling tires. H. V. Loss, Philadelphia, assignor to C. T. Schoen, Moylan, Pa.

863,549. Overshoe. H. Metz, Base m, Ohio.

863,571. Means for attaching flexible tubes to sources of water supply. C. J. Kintner, New York city.

Trade Marks.

27,771. Frank W. Whitchee, Boston. The word *Clutcher*. For rubber cement.

The B. F. Goodrich Co., Akron, Ohio. The following, for marking the kinds of goods specified:

28,503. The word *Akron*. For dental rubber.

28,506. The words *Babys Friends*. For infant pacifiers.

28,507. The word *Goodrich*. For dental cam.

28,508. The word *Endergon*. For water bottles.

28,509. The word *Angket*. For water bottles.

28,516. The words *Haskeli March*. For golf balls.

ISSUED AUGUST 26, 1907.

- 863,619. Packing. L. H. Martell, Ellwood City, Pa.
 863,656. Safety fuse. J. Sachs and F. D. Reynolds, Hartford, Conn., assignors to the Sachs Co.
 863,680. Armored pneumatic tires. H. W. Avery and W. S. Judd, Cleveland, Ohio.
 863,744. Air brake coupling. E. D. Nelson and W. L. Brown, Altoona, Pa.
 863,745. Hose pipe coupling end. *Same*.
 863,746. Air brake apparatus. *Same*.
 863,748. Clothes wringer. G. A. Paddock, Beaver Dam, Wis.
 863,787. Life saving apparatus. L. D'Elia, Seattle, Wash.
 863,793. Forming filaments out of viscose or similar viscous material. C. A. Ernst, Lansdowne, assignor to S. W. Pettit, Philadelphia.
 863,795. Hydraulic nozzle support. G. I. Henry, Jr., assignor of one-half to The Pelton Water Wheel Co., San Francisco.
 863,846. Hose cart. A. Hasse, Peoria, Ill.
 863,873. Heel cushion. P. W. Pratt, Boston, assignor to C. F. Brown, trustee, Reading, Mass.
 863,887. Joint clamp. H. Stuttle, Batavia, Ill.
 863,901. Coupling. K. Brumbaugh, assignor to Brumbaugh, Hamilton & Kellogg, all of Fairbanks, Alaska.
 863,917. Combination dress shield and bust supporter. J. Guest and G. M. Guest, Oakland, Cal.
 863,969. Telegraph and telephone cable core. W. Duesell, est. Old Charlton, and A. W. Martin, London, England.
 864,052. Vapor bath apparatus. O. D. Waltz, Tacoma, Wash.
 864,112. Elastic tire. W. S. Smith, Hyde Park place, and W. H. Edwards, Walthamstow, England, said Edwards assignor to said Smith.
 864,123. Method or process of coating nitrocellulose films. F. M. Gossitt, assignor to The Anthony & Scoville Co., both of Binghamton N. Y.
 864,141. Compressed air cushion mechanism for automobiles. T. E. Scott, Everett, Mass.

Trade Marks.

- 16,802. The M. Lindsay Rubber Manufacturing Co., Washington, D. C. Picture of Charles Goodyear with facsimile autograph beneath. For druggists' sundries and notions.
 16,803. The M. Lindsay Rubber Manufacturing Co., Washington, D. C. Picture of Charles Goodyear without autograph. For rubber footwear.
 28,430. Edward W. Dodez, Fort Wayne, Ind. The word *Omitite*. For dental cements.
 28,854. Continental Rubber Co., Jersey City, N. J. Double triangle in broken out lines enclosing the words *Triangle Brand*. For crude rubber.
 28,855. *Same*. Square in broken outlines enclosing the word *Square*. For crude rubber.
 28,856. *Same*. Double square in broken outlines enclosing words *Square Brand*. For crude rubber.
 28,857. *Same*. Triangle in broken outline enclosing the word *Triangle*. For crude rubber.
 28,901. Sch. Schwab & Co., Chicago. The words *Royal Blue*. For rubber boots and shoes.
 28,905. *Same*. Double outlined ellipse enclosing the words *The Sole of Honor*. For rubber boots and shoes.
 28,907. *Same*. The word *Solz*. For rubber boots and shoes.
 28,927. St. Paul Rubber Co., St. Paul, Minn. Black shield bearing the word *Hickory* in white letters. For rubber boots and shoes.

ISSUED AUGUST 27, 1907.

- 864,167. Insulating conduit for electric wires. A. P. Hinsky, Hoboken, N. J.
 864,195. Apparatus for making rubber stamps. G. J. B. Rodwell, Chicago, assignor of one-half to Timmins & Butler, Buffalo, N. Y.
 864,210. Belt splicer. J. B. Stone, London, England.
 864,219. Overshoe clamp. E. W. Waltz, Linden, Pa.
 864,225. Tire mending implement. J. W. Blodgett, assignor to J. H. McElroy, trustee, both of Chicago.
 864,226. Method of inserting plugs in pneumatic tires. J. W. Blodgett, assignor to J. M. McElroy, trustee, both of Chicago.
 864,299. Hose coupling. R. M. Haley, Columbus, Ohio.
 864,317. Air wheel. H. A. Lockwood, Kansas City, Mo.
 864,375. Wheel rim. E. Hopkinson, East Orange, N. J.
 864,419. Gasket. H. F. Grey, assignor of one-half to J. F. Holland, both of Philadelphia.
 864,445. Respirator. E. N. Casey and H. E. Rothbun, Providence, R. I., assignors, by music assignments, to American Respirator Co., Boston.
 864,528. Vibrator or massage instrument. F. B. Fuchs, Newark, N. J.
 864,582. Mold for forming hollow articles. J. A. Williams, Iron, Ohio.
 864,616. Rubber boot. J. T. Crowley, Lamb rtville, N. J.
 864,627. Wheel. W. H. Douglas, Belleville, N. J., assignor to Healey & Co., New York city.
 864,652. Coupling device. W. J. King, Watervally, Miss.
 864,745. Bowling ball. E. A. Schenck, Kansas City, Kan.

Reissue.

- 12,685. Method of making waterproof welts. J. R. Reynolds, Hartford, Conn., assignor to The Waterproof Welt and Filler Co.

Trade Mark.

- 20,711. George A. Moon & Co., Boston. A No. 1 monogram in broken outline. For mineral rubber.
 28,462. American Circular Loom Co., Portland, Maine. Design showing cross section of insulated wires, spots indicating wires being of a silvery color. For electric conduits.
 28,872. Birmingham Iron Foundry, Derby, Conn. The word *Birmingham*. For rubber mill machinery.
 29,112. The M. Lindsay Rubber Manufacturing Co., New York and Washington, D. C. Picture of Charles Goodyear with facsimile autograph beneath. For certain specified druggists and surgical sundries.

[Note.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number gives the date assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 17, 1907.]
 7,339 (1906). Spring wheel with tire of rubber blocks wound with wire cable. A. Dickinson, Birmingham.
 7,441 (1906). Boot with inner sole embracing airtight compartments of rubber. R. E. Cretney, Douglas, Isle of Man.
 7,460 (1906). Rubber brush for applying liquids to the scalp. H. J. Walker, London.
 7,497 (1906). Cover for motor car tires. F. J. Whitlock, London.
 7,511 (1906). Studded tread band to prevent skidding of tires. F. W. Brampton, Wolverley.
 7,512 (1906). Non slipping tread for tires, boots and the like. W. E. Partridge, Birmingham.
 7,552 (1906). Pneumatic tire with air tube wholly inclosed within the rim and protected by a solid rubber tread. F. H. Pickering.
 7,558 (1906). Tire inflating pump actuated by the motion of the wheel. A. Radbourne, Birmingham, and another.
 7,578 (1906). Gage for india-rubber calendering machine. E. A. Claremont, Manchester, and another.
 7,671 (1906). Means for securing a detachable flange to a wheel rim. D. A. A. Prust, London, and another.
 7,727 (1906). Washing and wringing machine. W. Drawe, Warburg, Germany.
 7,790 (1906). Spring wheel with solid rubber tire. A. W. Tidbury, London.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 24, 1907.]
 7,937 (1906). Pneumatic tire. W. Drury, London.
 7,937A (1906). Pneumatic and cushion tires. W. Drury, London.
 7,949 (1906). Solid rubber tire, with non-skidding metal rings. G. B. Winter, London.
 8,079 (1906). Spring wheel, with spokes bearing on rubber cushions. A. E. Prillie, Paris, France.
 8,142 (1906). Tire valve with rubber cap. P. B. Cow and W. S. H. Smith, London.
 *8,162 (1906). Rubber shoe dipping and varnishing machine. J. H. Wall, Bristol, Rhode Island.
 8,188 (1906). Solid and cushion tires. E. B. Killen, London.
 8,205 (1906). Pneumatic heel pad. J. Cairns, London.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 31, 1907.]
 8,220 (1906). Non-skid studs for tires. J. W. Towle, London.
 *8,234 (1906). Spring tire with rubber tread. B. C. Seaton, St. Louis, Missouri.
 8,313 (1906). Waterproof fabrics made by cementing a thin sheet of gutta-percha to cloth with rubber cement. E. Frankenberg, Hanover, Germany.
 8,335 (1906). Link belt non-skid for tires. A. H. Duncuff, Birmingham.
 8,369 (1906). Sectional solid tire. E. B. Killen, London.
 8,398 (1906). Tire tube and security bolt. C. W. Dean, London.
 8,465 (1906). Rubber covered roller, the vulcanization being greater at the core. A. Wilson, Silsden, Yorkshire.
 8,514 (1906). Rubber stair treads. C. H. Gray, Silvertown.
 *8,602 (1906). Solid rubber tire reinforced by coiled springs. F. J. Lancaster, New York city.
 8,661 (1906). Rubber connection for tire pumps. J. C. P. Petersen and K. Miller, Copenhagen, Denmark.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 8, 1907.]
 *8,684 (1906). Collapsible boat made of waterproof cloth. J. F. Hawley, Pennsylvania.
 8,704 (1906). Expanding pipe plug, with rubber contact ring. D. Smith, Sheffield.
 8,729 (1906). Spring wheel, having two concentric pneumatic tubes interposed between rim and hub. A. Cuming, London.
 8,736 (1906). Rubber covered spring roller. A. Ostermann, Westfalen, Germany.
 8,767 (1906). Rubber pedals for bicycles. W. Wippermann, Westfalen, Germany.
 8,817 (1906). Tire vulcanizer in sections. H. F. Poulney, Handsworth, Staffordshire.

- *8,846 (1906). Spring wheel, comprising springs and rubber blocks. J. H. Linnert, Philadelphia, Pennsylvania.
- 8,957 (1906). Rubber substitute, made of vulcanized eel liver or sun-dried oil, mixed with isoprene and matesite, which last is a Madagascar plant juice. P. Bersin, St. Petersburg, Russia.
- 9,088 (1906). Studs for tires and stair treads. W. Turner and New Motor and General Rubber Co., London.
- 9,090 (1906). Mold for tires. K. Ramshotom, J. W. Turner, and A. Buxton, Manchester.
- 9,097 (1906). Tire removing tool. L. Mellor, Buxton, Derbyshire.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 14, 1907.]
- 9,086 (1906). Unvulcanized rubber insulating posts and discs in electric influence machines. H. Wommelsdorf, Charlottenberg, Germany.
- *9,171 (1906). Pneumatic cow catcher for street cars. J. Post, Philadelphia, Pennsylvania.
- 9,248 (1906). Tubeless pneumatic tire. J. D. Roots, London.
- 9,290 (1906). Rubber reclaiming or purifying apparatus. M. Wilderman, London.
- 9,308 (1906). Urethral syringe with rubber bulb and tube. J. H. Hoseason, Manchester.
- 9,322 (1906). Attaching shoe soles of self-hardening composition by means of imbedded studs, etc. L. Levy, Cologne, Germany.
- 9,332 (1906). Quick fastener for belts. H. and A. M. Lewis, Handsworth, Staffordshire.
- 9,333 (1906). Wire brush for roughening tire treads before applying protector. C. Joly, London.
- 9,382 (1906). Rubber door check. W. H. Thorne, Upper Parkstone, Dorsetshire.
- 9,402 (1906). Artificially, with rubber block in ankle joint. H. Yearsley, Eccles.
- 9,512 (1906). Spring wheel with rubber tire. H. F. Nichols, Adelaide, S. Australia.
- 9,519 (1906). Draw spring for vehicles, comprising rubber cushions or buffers. E. Poizat, Paris, France.
- 9,527 (1906). Pneumatic tire with plates to engage clincher rim. Glaub & Co., Mannedorf, Switzerland.
- 9,529 (1906). Cycle tire, with rivets for engaging clincher rim. J. W. Mackenzie, London.
- 9,590 (1906). Removable rim. C. S. and J. A. Challiner, Manchester.
- *9,579 (1906). Rubber lined and covered air brake hose. F. A. Magowan, New York city.

THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 373,315 (Jan. 4, 1907). C. E. Henroid. Shock absorber.
- 373,354 (Jan. 5). E. Gare. Process of rubber manufacture.
- 373,485 (Jan. 12). J. Hart. Tire repair outfit.
- 373,544 (Jan. 14). Broadwell. Tire removing or applying tool.
- 373,552 (Jan. 14). D. Smith and F. W. Smith. Rubber shoe.
- 373,602 (Jan. 15). Société Générale des établissements Berguignan. Armored pneumatic tire.
- 373,603 (Jan. 17). H. G. Lesur. Method of inflating tires while running.
- 373,649 (Jan. 17). D. Levat and L. Guiguet. Apparatus for extracting rubber from vines or roots.
- 373,730 (Jan. 17). D. Levat and L. Guiguet. Grinder for rubber bark.
- 373,786 (Jan. 22). L. Farnoux. Pneumatic tire.
- 373,880 (Jan. 24). Jonard. Elastic tire.
- 374,036 (Jan. 29). L. Perard. Antiskid, punctureproof pneumatic tire.
- 374,080 (Jan. 30). Platel. Pneumatic tire.
- 374,081 (Jan. 30). Plinatus. Pneumatic tire.
- 374,093 (Jan. 30). Monteiro Le Brito. Cushion tire, cork filled.
- 374,114 (Feb. 2). J. Poulet. Removable rim.
- 374,149 (Feb. 2). Baudry. Detachable tire.
- 374,247 (Jan. 31). E. Cardinet. Fastening for tires and skid treads.
- 374,292 (Feb. 5). American Cellular Tire Co. Pneumatic tire.
- 374,345 (Feb. 6). Subra. Elastic tire.
- 374,347 (Feb. 6). Lesnee et Cie. Generale de Pneumatiques Increvable Elastic tire.
- 374,348 (Feb. 6). Wilman. Antiskid for tires.
- 374,419 (Feb. 8). M. Maunier. Wheel brake.
- 374,436 (Jan. 8). C. Gote and de Vitre. Tire protector.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Robert, Ingenieur-Conseil, 10 avenue de Villiers, Paris, at 50 cents each, postpaid.]

INNER TUBES.—*Motor Print* says: "Do not put too much French chalk in the outer cover for fear that it may lump and damage the inner tube. This is sure to happen if by any means moisture finds its way to the chalk. Graphite is a very efficient substitute for the chalk when the latter is not at hand." Except for the fact that graphite is black and therefore blackens the hands, it is far superior in every way to French chalk or talcum.

Graphite.

NEW TENNIS SHOE LISTS.

UNDER date of September 3 the United States Rubber Co. issued a new price list of tennis, yachting, and gymnasium shoes. Prices are as follows:

VACATION BRAND.*

(Extra heavy, red rubber soles.)

	Balmorals.	Oxfords
Men's	\$1.25	\$1.10
Boys'	1.20	1.05
Youths'	1.15	1.00
Women's	1.20	1.05
Misses'	1.15	1.00
Children's	1.10	.95

YACHTING BRAND.*

(White rubber soles, leather insoles, cartons.)

	Balmorals.	Oxfords.
Men's	\$1.05	\$0.95
Boys' .....	.95	.85
Youths' .....	.85	.75
Women's .....	.90	.80
Misses' .....	.85	.75
Children's .....	.80	.70

NATIONAL BRAND.†

(Leather insoles, cartons.)

	Balmorals.	Oxfords.
Men's	\$1.05	\$0.95
Boys' .....	.95	.85
Youths' .....	.85	.75
Women's .....	.90	.80
Misses' .....	.85	.75
Children's .....	.80	.70

CHAMPION BRAND.‡

(In bulk.)

	Balmorals.	Oxfords.
Men's	\$0.65	\$0.55
Boys' .....	.58	.48
Youths' .....	.53	.43
Women's .....	.55	.45
Misses' .....	.50	.40
Children's .....	.45	.35

GYMNASIUM BRAND.‡

(Leather insoles, cartons.)

	Balmorals.	Oxfords.
Men's	\$0.85	\$0.75
Boys' .....	.75	.65
Youths' .....	.65	.55
Women's .....	.70	.60
Misses' .....	.65	.55
Children's .....	.50	.50

BATHING SHOES.‡

(In bulk.)

Men's	\$0.45
Boys' .....	.40
Youths' .....	.40
Women's .....	.40
Misses' .....	.40
Children's .....	.35

*White or brown duck.

†White, black or brown duck.

‡White or black duck.

Prices are unchanged for Vacation brands; higher for Yachting bals and lower for Yachting oxfords; and generally lower on the remainder of the list.

The Lycoming Rubber Co. (Williamsport, Pennsylvania), a subsidiary of the United States Rubber Co., have entered the tennis trade, with their Lycoming and Keystone brands, of which a list has been issued, under date of September 1. The items in their list correspond generally to the Vacation, National, Champion, and Gymnasium brands in the preceding list, and at the same prices. In addition to the colors alone named, some of the Lycoming company's goods come in tan and wine duck.

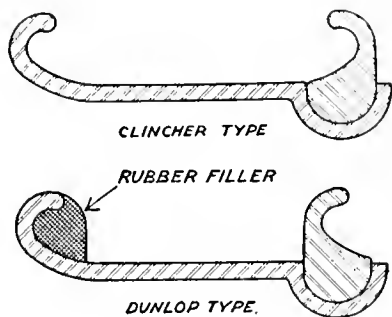
The Goodyear's India-Rubber Glove Manufacturing Co. also issue, under the same date as above, a list of goods designated as the Outing, Racquet, and Athlete brands, each covering balmorals and oxfords.

Among the Tire Makers.

NEW MIDGLEY UNIVERSAL RIM.

THE Midgley rim for automobile tires as now being placed on the market for 1908, while the same in principle as the rim marketed under this name hitherto, embodies some improvements of note which have been designed with a view to simplicity. The most radical departure from the old rim is that the new rim, instead of being hollow, is rolled out of a solid piece of steel, by reason of which the rim may be fitted to wheels with less labor than formerly.

Another point is the incorporation in the rim proper of a clinch as on the standard Clincher rim, necessitating the use of but one detachable bead, which fits in the groove on the outer edge of the rim as in the past. Formerly there were two detachable beads, making the two sides of the rim alike. When this bead is fitted with the clincher side in, the rim takes any standard make of clincher tire and by simply reversing the bead and fitting a rubber filler in the permanent clinch on the rim, a Dunlop tire can be used, as the filler is so made as to fit in the clinch and exactly correspond to the straight edge of the detach-



NEW MIDGLEY RIM.

able ring which accommodates the Dunlop tire.

The two illustrations herewith show (1) the Midgley rim, designed for the Clincher type of tire and (2) the same rim designed for Dunlop tires, the latter having a rubber filler in the clinch on the left.

The inside dimensions

of the Midgley Universal rim and the width at the tire seat are exactly the same as the standard Clincher dimensions.

The method of drawing up the bead is by means of the turnbuckle which has been employed since the first Midgley detachable rim was placed upon the market, in the autumn of 1904.

The Midgley Manufacturing Co. (Columbus, Ohio) announce that during four years, ending July 28 last, 118,204 Midgley rims for automobiles were made by them and shipped on bona fide orders. The Midgley company have been adding 100,000 square feet of floor space to their plant and installing additional machinery at a cost of \$60,000.

SWINEHART TIRES IN EUROPE.

DURING a recent visit to Europe Mr. B. C. Swinehart, vice president of The Swinehart Clincher Tire and Rubber Co. (Akron, Ohio), entered into arrangements with Actiengesellschaft Metzeler & Co., of Munich, for the manufacture and sale of tires in Germany and England, under the Swinehart patents. Messrs. Metzeler have purchased the patents for Germany and leased the rights for Great Britain.

LEATHER MOTOR TIRES.

THE Antioak automobile tires are made from specially tanned leather produced under a secret process by the Antioak Leather Co., a California corporation owning a large factory at Los Angeles. This leather has been put to a number of uses, including the making of tire covers. The leather as treated for tires is referred to as not affected by use in the wet or by heat, light, or oil, and does not harden or crack. Antioak tires are made of two or three thicknesses of this specially prepared leather, with an anti-friction coating between the layers. The tires are manufactured also at Los Angeles by the Antioak Tire Co., a corpora-

tion of New Jersey, with an authorized capital of \$1,000,000, one-half of 7 per cent. cumulative preferred stock and one-half common. The Antioak Tire Co. have offices at No. 209 Broadway, New York, and are called the parent company. Selling companies are being organized in the various states, such companies having been incorporated in New York, New Jersey, Connecticut, and California, and others are in process of formation. New York Antioak Auto Tire Co., the incorporation of which was reported in *THE INDIA RUBBER WORLD* August 1 (page 353), have opened an office at Nos. 1781-1783 Broadway, New York.

THE BICYCLE TIRE TRADE.

ONE is strongly reminded of earlier days in the trade by the reappearance of catalogues of bicycle tires, a type of trade publication which, following the decline in cycling, practically disappeared. Such a catalogue has just been issued by Morgan & Wright (Detroit, Michigan), forming a neat brochure of 48 pages, in which are described not only the double tube tires with which the firm have been so long identified, but also single tube and cushion tires together with a long list of sundries and specialties for use in connection with use for tires and their repair. The firm announce themselves optimistic regarding the future of the bicycle. They say that while in 1904 the total output of wheels in the United States did not exceed 200,000, this amount was increased to over 500,000 in 1906, with estimated requirements for the present year of 750,000.

From other quarters evidence comes of a growing in cycling in this country. The second midsummer meeting of the Cycle Manufacturing Association at Atlantic City this year, in connection with two allied associations—makers of accessories and the bicycle jobbers—was largely attended, and those present evinced great enthusiasm over the condition of the trades which they represent. This feeling was shared by *The Bicycle World*, which regards the Atlantic City meeting as marking "the birth of a new bicycle trade."

MIRACULUM, FOR CURING PUNCTURES.

A NEW compound called "Miraculum" has been introduced to the tire trade in England, the injection of which into inner tubes is intended to render them immune from punctures. The preparation is understood to have originated in Australia, and its constituents thus far remain a secret, but it is described as a semi-liquid, similar in appearance and thickness to cream, which is injected through the valve and spreads over the inner surface of the tube as the wheel revolves, being at all times in readiness to fill any puncture that may be sustained by the tire. Miraculum is claimed not to solidify in the tubes or evaporate; not to prevent tubes from being patched or vulcanized in the usual manner; and not to affect the resiliency of tires. Besides, it is referred to as preserving the rubber rather than affecting it injuriously.

A company has been registered in England under the style Miraculum, Limited, with £25,000 [= \$121,662.50] capital, for exploiting the new material. The prospectus of the company mentions a number of tests which seem to support the claims made for the compound. The secretary of the company is Arthur E. Cowley, and the registered office, 48, Dover street, W., London. The United States consul at Birmingham reports that "Miraculum" is to be introduced into the American market.

TIRE COMPANY NOTES.

THE Detroit branch of the Hartford Rubber Works Co., at No. 256 Jefferson avenue, has been placed in charge of H. C. Severance, formerly of the home office, and who has been connected with the company from boyhood.

Charles Measure, long and widely known in the automobile

tire trade, has been appointed manager of the New York branch of The Goodyear Tire and Rubber Co. (Akron, Ohio), to succeed K. B. Harwood, resigned.

E. H. Broadwell, for a considerable time manager of the Detroit branch of The Fisk Rubber Co., has been called to Chicopee Falls to become general sales manager of the company.

Morgan & Wright (Detroit, Michigan) have established a branch at Los Angeles, at Nos. 118-122 East Tenth street, for the accommodation of their tire customers in southern California. Morgan & Wright have established a branch in Philadelphia, at Thirteenth and Cherry streets, with Harvey H. Colbath manager.

Robert J. Firestone, sales manager of the Firestone Tire and Rubber Co. (Akron, Ohio), is absent on a business tour of Mexico and the Pacific coast states. The company will establish a branch in Mexico city.

John D. Hodgkins, for several years manager of the St. Louis branch of the Firestone Tire and Rubber Co. (Akron, Ohio), will hereafter represent that company at Atlanta, Georgia, being succeeded at St. Louis by O. O. Petty.

The Diamond Rubber Co. (Akron, Ohio) have opened a branch at Los Angeles, California, at Nos. 1207-1209 Main street, in charge of F. O. Nelson, who has equipped it with a full stock of tires.

The Todd Rubber Co. (New Haven, Connecticut), of which E. J. Todd is president, are doing an active business in the sale of solid tires. They received, not long since, at one shipment, 66 500-foot reels of rubber tire stock from the Consolidated Rubber Tire Co. (New York), whom they represent in New Haven.

The Michelin Tire Co. have appointed as manager of their Boston branch Mr. Laurence H. Fiske, who for three years past has been local manager of the International Rubber Co. J. Wilbur Hobbs, lately with The Diamond Rubber Co., has been appointed manager of the Michelin New York office.

E. E. McMaster, an experienced tire salesman, has been appointed western manager of the Continental Caoutchouc Co. (New York), with headquarters at Detroit.

The Gaulois Tire Co., No. 1739 Broadway, New York, are sole American representatives of the "Gaulois" tire, made by Bergougnan & Cie., of Clermont-Ferrand, France.

The Palmer Cord motor tires are being made in sizes up to six inches.

The "Continental" tire agency for the Federated Malay States has been placed with the Federated Engineering Co., at Kuala Lumpur. The "Persan" tires, made by the India Rubber, Gutta Percha, and Telegraph Works Co., Limited, are sold there by Zacharias & Co.



"SPRINGFIELD" DETACHABLE TIRE TOOL.

[Designed for use in connection with pry blades furnished by the tire makers, to remove clincher tires from rims. Some tools used to loosen tires, which have become attached to the rims, lead to their serious injury. The parts of the "Springfield" tool that come in contact with the tire conform to its shape, and thus do not injure it. The Shawver Co., Springfield, Ohio.]

RUBBER PLANTERS OF MEXICO.

A CALL has been issued for a meeting of rubber planters in Mexico, whether private individuals or representatives of corporations, to be held on October 9-10, in the club room of the *Mexican Herald* building, in the city of Mexico. The circular of invitation says:

"Our rubber planting industry is now reaching the stage when the first large results are being obtained, and it will save the individual planters considerable time and expense if results are compared and new and modern methods adopted in the collection of the raw material as well as in preparation of the final product. - - - The rubber planters of Mexico should learn the best methods of marketing their product, so as to obtain the best possible results. The experimental era of rubber planting is now drawing to its end."

The invitation committee consists of Dr. Pehr Olsson-Seffer, of La Zacualpa botanical station; Paul Hudson, of the *Mexican Herald*; W. B. Murray, of the *Mexican Investor*; and Ignacio Carranza, of *El Heraldo Agrícola*.

The program of subjects to be discussed includes "The Necessity of Regulating Rubber Collecting by Federal Legislation" and "Mexico at the First International Rubber Exhibition to be Held in London, Autumn, 1908." Papers are announced on "The Present Condition of Rubber Culture" and "Preparation of Crude Rubber," by Dr. Olsson-Seffer; "Cacao as an Adjunct to Rubber Culture," by Mr. James C. Harvey; and "The Rubber Planter and the Labor Supply," by Señor Carranza. There will be a planters' dinner on the evening of October 9, and an election of officers at the close of the convention, on October 10.

This will be the second attempt to bring about concerted action among the rubber planters of Mexico. In 1903 the preliminary steps were taken for the organization of the United Planters' Association of Mexico. By-laws were prepared by a committee and printed, and a tentative organization formed, but practically all that was done was to celebrate the Fourth of July and the Mexican Independence Day, which is September 16, by giving banquets. [See THE INDIA RUBBER WORLD, September 1, 1907.]

TO REGULATE COTTON PRICES.

THERE is a movement on foot among the cotton producers in the United States to form an organization for the purpose of fixing a minimum price for cotton. On September 5 the executive committee of the Southern Cotton Association, at their annual fall meeting at Jackson, Mississippi, voted to recommend that the growers demand 15 cents for cotton, middling basis, at interior points. The Farmers' Union, in national convention at Little Rock, Arkansas, on September 3, voted unanimously for a minimum price of 15 cents per pound for the crop of 1907. This movement seems to have been encouraged by the evident greater willingness of southern bankers to advance money on cotton in storage than ever before. *The Cotton Journal* says that it is now an easy matter to store a 500 pound bale of cotton in a warehouse and borrow on it \$50 from a local bank, at from 6 to 8 per cent. per year. Counting storage, insurance, and interest on a bale of cotton, if held on an average of six months, this means an expense of less than 1 cent a pound. But by holding and selling slowly a gain is hoped for of 3 or 4 cents a pound over the prices likely to be realized if the crop should be rushed on the market in large quantities, during the next three months.

* * *

THE semi-annual meeting of the National Association of Cotton Manufacturers will be held at Washington, D. C., on October 3-4, on the last of which days the European delegates to the cotton conference at Atlanta, mentioned on another page of this paper, will be present. The program embraces a number of topics of interest to cotton manufacturers, while some will appeal no less to planting interests.

OBITUARY.

SIR DIETRICH BRANDIS, LL. D., F. R. S., who died at Bonn, Germany, May 28, 1907, entered the forestry service of India at the age of 32 and retired from it in 1883, after a notable career, having practically created the state forest department. Eight years subsequently were spent in connection with the royal botanic gardens at Kew, where again he rendered distinguished service. As Dr. Brandis, Sir Dietrich made a contribution of value to the "Report on the Caoutchouc of Commerce" by James Collins (London: 1872), which has now become a classic.

* * *

DURAND WOODMAN, PH.D., died at Fairwood, New Jersey, September 4, 1907, at the age of 47. He was born in New York city and was graduated from the Stevens Institute of Technology in the class of 1880, after which he studied at the University of Berlin and the analytical laboratory of Fresenius, in Wiesbaden. From 1883 to 1886 Dr. Woodman was chemist for the United States Electric Light Co. In 1891 he opened a laboratory as



DR. DURAND WOODMAN.

analytic and consulting chemist in New York city, which he continued until his death. Much of his work here was in connection with india-rubber and its applications, which brought him into contact with many members of the rubber trade. Dr. Woodman was a member of the American Chemical Society, Society of Chemical Industry (London), Deutscher Chemische-Gesellschaft (Berlin), Verein Deutscher Chemiker, Chemists' Club, and the Stevens Alumni.

* * *

HORACE W. BUTLER, who died at Akron, Ohio, on September 17, in his eighty-eighth year, was born in Weatherfield, Connecticut, and had lived in Akron since 1865. He was a foundry pattern maker until ten years ago, when he gave up work. He was the father of Charles J. Butler, president of Morgan & Wright, the rubber manufacturers at Detroit.

COMING AUTOMOBILE SHOWS.

THE automobile show season this year, in the United States, will begin this month. The first of the big shows will be the eighth annual of the Automobile Club of America in connection with the American Motor Car Manufacturers' Association, at the Grand Central Palace, New York, October 24-31. The space allotted to exhibitors on September 7 amounted to 65,000 square feet, or about 10,000 more than last year, the increase to be provided for by remodelling portions of the building. A considerable amount of space was drawn by the 104 members of the Motor and Accessories Association, Inc. The tire trade promises to be well represented, in the way of standard tires and also those less known, and tire specialties.

New York's next show, the third held under the auspices of the Association of Licensed Automobile Manufacturers, will be held in the Madison Square Garden, November 2-9. Here, too, more space will be required than at any previous show, the extra space to result from remodelling the basement of the building. Last season there were 255 individual exhibitors at the Garden; this year the number is expected to reach 325.

The Garden will be opened again, from December 28 to January 4, for the Importers' Salon.

The Chicago automobile show, under the auspices of the National Association of Automobile Manufacturers, will be held November 30-December 7, in the Coliseum and the armories of the First and Seventh regiments. This will be Chicago's eighth annual automobile show, in connection with which will be held the first annual commercial vehicle show. The allotment of spaces was announced in September, indicating a total of 250 intending exhibitors, against 222 last year. The list embraces 90 car builders, and the rest will exhibit accessories, including 16 rubber tire makers of prominence.

* * *

LONDON'S Olympia motor show is scheduled for November 11-23; the Grand Palais show of Paris for November 12-December 1; and the Berlin show for December 5-12.

RECORD OF RUBBER PLANTATIONS.

A VALUABLE book of reference is the "Tropical Investors' Guide"—a register of rubber and tea companies in Ceylon, Malaya, and elsewhere in the Far East, lately brought out by the publishers of *The Times of Ceylon*, of Colombo. It lists more than 200 companies engaged in rubber planting, or rubber in connection with tea or other crops, giving just such details as an investor or intending investor would wish to know or be able to refer to, the information in most cases being brought down to July 1 of this year, or later. The names of the directors are given, together with location of head offices, amount of capital authorized or paid in, acreage in rubber, statistics of production, dividends, quotations for shares, etc. The book will be of interest doubtless to many non-investors, as a record of the location, extent, and results of rubber culture in the East. This book of 277 octavo pages is supplied by Capper & Sons, 27, Mining lane, E. C., London, for 7 shillings or \$1.75 (gold).

WANTS AND INQUIRIES.

[429] **A**N inquirer in Canada wishes to obtain a really good solution to prevent rubber from sticking to iron molds in vulcanizing.

[430] "In your issue of November, 1906, you have an interesting article on Petrolatum as a rubber compounding ingredient. We should be pleased to know where to obtain this material."

[431] Information is asked for regarding the manufacture of golf balls and where machinery for the same can be procured.

[432] The names of manufacturers of corn oil are asked for.

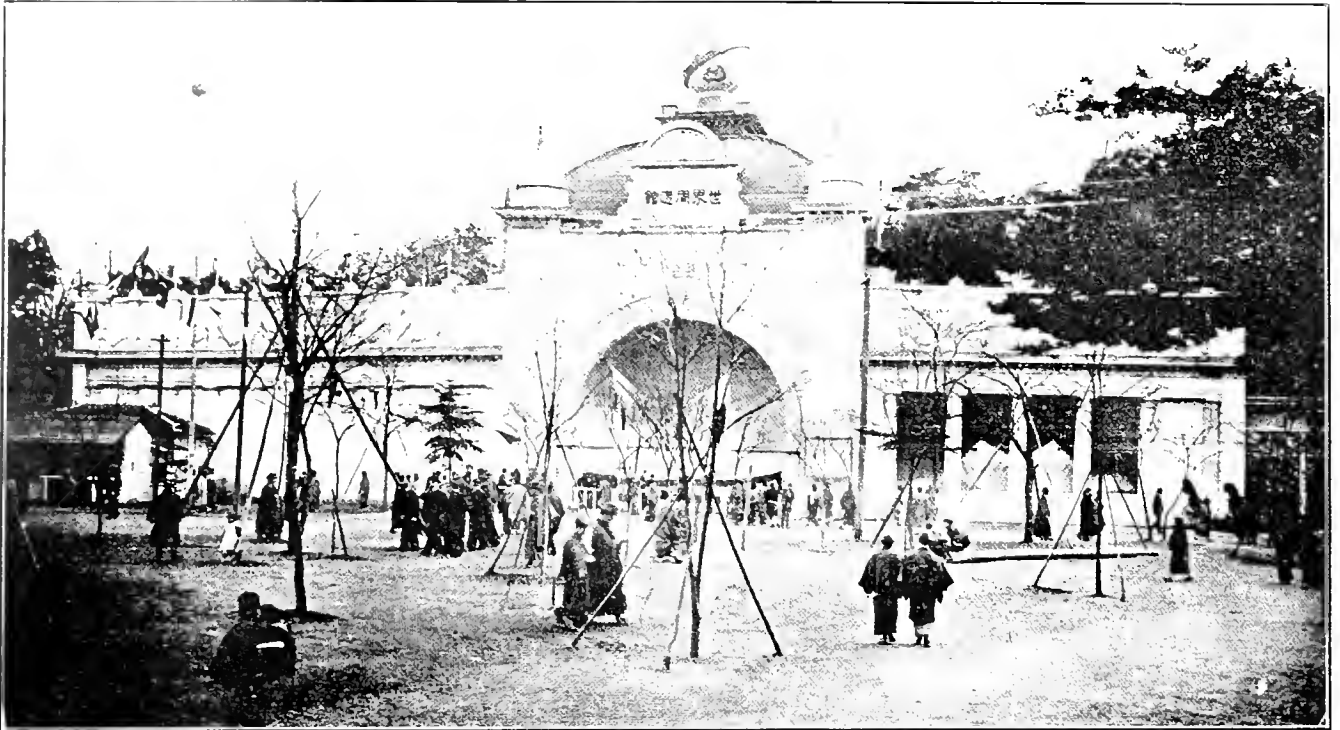
[433] Details are wanted regarding machines for quickly vulcanizing wire-edged cycle tires, and information as to where they can be procured.

[434] A foreign concern wishes prices and samples of materials used by Americans in the manufacture of rubber balls.

[435] From Germany comes a request for the names of producers able to supply "Ceylon" graphite direct to European customers.

[436] A member of the cotton goods trade desires information regarding "Methley patent cloth," a fabric adapted for automobile tops.

[437] The name and address are desired of any firm controlling articles made from vulcan fiber or silestih.



THIS BUILDING IS CALLED THE FIRST COMPOUND.



THIS BUILDING IS CALLED THE SECOND COMPOUND.
TWO PRINCIPAL BUILDINGS OF THE TOKIO INDUSTRIAL EXPOSITION.

RUBBER AT THE TOKIO EXHIBITION.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD. The Tokio Local Exhibition, opened in Ueno Park on March 29 and only just closed, illustrated in a very encouraging manner the industrial progress now being made in Japan. The broader application of science and art to our industries within recent years, with the aid afforded by capitalists, has led to development in all branches in marked contrast with the comparatively primitive conditions prevailing up to less than a decade.

This improvement refers in no small degree to manufactures of india-rubber. At the fifth Japanese National Exhibition, held at Osaka in 1902, the exhibits of rubber goods of domestic manufacture were much inferior to those in the same classes shown by foreign makers. At the late Tokio Local Exhibition, as its name implies, only local manufacturers were invited to exhibit; it was not even open to all Japan. But the display of rubber goods was of striking interest, and gave evidence of remarkable progress in this industry. The range of rubber exhibits is indicated by the following list of the principal displays:

Gomei Kaisha Mitatsuchi showed especially ebonite for electrical uses; also, rubber tires, divers' suits, rubber balls, and hygienic articles. They were awarded a silver medal of honor.

Meija Gomu Meiji (Meiji Rubber Works) exhibited automobile tires, bicycle tires, hydraulic hose for 4000 pounds pressure, vacuum hose, and ebonite goods. A sample was shown of hose 12 inches in diameter made especially for the navy, for discharging water from the warships captured during the Russo-Japanese war. This hose and the automobile tires attracted special attention. A silver medal of honor was awarded to this exhibit.

Tokio Rubber Works, Limited, received a diploma of the first order for a display in which rubber rolls and belting predominated. Paper mill rolls were shown, 8 feet long and 10 inches in diameter, and belting up to 20 inches. The exhibit included also suction hose, packings, and rubber sheeting.

Nippon Gomu Kabushiki (Nippon Rubber Co., Limited) exhibited suction and delivery hoses, packings, and rubber gloves and balls. Their "Anchor Brand" suction hose is this firm's specialty and has attracted much attention in the market. Award: Diploma of the first order.

Exhibits were made likewise by the Ida Shoten, of general rubber goods; the Kamiyo Shoten, balloons and easter rollers; K. Furukawa, rubber balls; Nomoto Kojo, bicycle tires, soles, and hose pipes.

Fujikura Insulated Wire and Rubber Co. were exhibitors of rubber insulated wire of every description. Their display included some special wires which have been adapted by the army and by the navy of Japan. Such supplies until recently were all obtained abroad. But since the product of the Fujikura company has been adopted, their wires are being used exclusively. They have also been appointed makers of wires for the department of communication, being the only Japanese makers so approved. The department named is very particular in its wire specifications, there being very few manufacturers abroad whose product has been approved by it.

Tokio, Japan, August 15, 1907.

KENZO OKADA.

[THE Tokio exposition buildings were numerous, many on a large scale, and attractive architecturally; as indicated by views of two of them on another page. These buildings were described as the "First Compound" and the "Second Compound" and designed for general exhibition purposes, besides which there were many buildings for specific classes of exhibits. Not the least interesting feature, from the Japanese viewpoint, was the war equipment manufactured at home.—THE EDITOR.]

THE GUAYULE INTEREST.

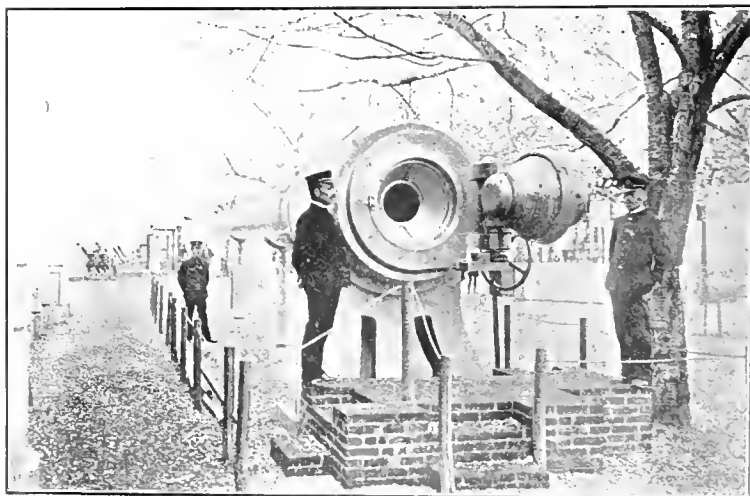
BIDS were opened at Austin, Texas, on September 5, under the law passed in that state in April last for the sale of the guayule shrubs on lands belonging to the state. It was required (1) that bids for guayule should be for the entire supply within the state; (2) that no raw guayule should be shipped outside, but must be manufactured into finished products within the state; and (3) that no bid would be accepted from any person who is "a party to or a member of any trust, monopoly, or combination in restraint of trade." Though not officially stated at last accounts, it is understood that the highest bidder was an attorney of San Antonio, Texas, representing the Big Bend Manufacturing Co., a corporation of Delaware, which on September 5 received a permit to do business in Texas. The bidder mentioned said that his principals intended putting up a \$200,000 factory near Eagle Pass. They estimated the total guayule shrub supply in the whole of the state of Texas at 180,000 to 200,000 tons.

AT TORREON.

CHARLES J. MCGREGOR, who died at Torreon, Mexico, on August 13, aged about 35 years, was a native of Geneva, Ohio, where his remains were sent. He settled in Mexico some ten years ago, practically without capital, and acquired a fortune, partially through the guayule interest. He started a guayule rubber factory at Torreon, which got into operation in May, 1906, after which time it was at work day and night. THE INDIA RUBBER WORLD is informed that McGregor left his estate in good shape and that the operation of the factory is being continued.

The law making Torreon a city became effective on September 10, which event was the occasion of the greatest celebration ever seen in that place. The program for the day formed part of the usual celebration of that date, which was the anniversary of the declaration of Mexican independence. The progress of Torreon has been very rapid of late, being contributed to not a little by the development of the guayule rubber interest there. Guayule is now the largest item of export from Torreon. The value of guayule shipped during July was \$408,050.07 (Mex.), and during August \$532,481.71.

Just before starting for the United States on his summer vacation, J. A. Whitcomb, superintendent of the guayule factory of the Continental Rubber Co. at Torreon, was tendered an entertainment at the clubhouse maintained by and for the employes, that was largely attended from Torreon and a number of neighboring places. The finest orchestra in northern Mexico was secured, and a special train on the Mexican International railway chartered.



A HUGE JAPANESE MADE CANNON AT THE EXHIBITION.

WORK OF THE PARA RECOVERY CO.

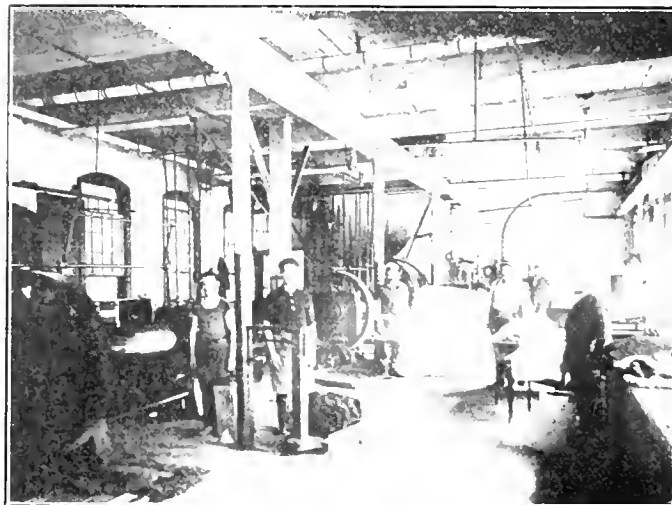
THE fact that the Para Recovery Co. have booked orders for something like 1,000 tons of their Mexican Yucatan rubber and that the New York Commercial Co. have taken over the selling agency of the product, makes the proposition one that is of definite interest to the trade. The company have a factory situated at Bayonne, New Jersey, and are operating under secret processes invented by Mr. George E. Heyl-Dia. The fact that the processes are secret, of course, places an embargo upon visitors. THE INDIA RUBBER WORLD, however, is able to give the trade a look into the washing, mixing, and drying rooms, through views which the company were good enough to furnish. From these photographs one learns that there are something like 7 to 10 paper engines in use for washing, 8 large mix-

referred to, by which non-rubber hydrocarbons are changed into rubber.

It is well known that the terpenes, of which there are many, have chemically the same formula $[C_{10}H_{16}]$ or the same molecules of carbon and hydrogen as rubber. They are, however, differently bonded by nature, so that their physical appearance and qualities differ. Heyl-Dia found that Venetian turpentine and balata, combined under certain conditions, formed a new compound, identical with rubber, chemically and physically. This fact is as novel as it is interesting generally, as it proves that a rearrangement of molecules of two or more entirely different substances physically produces a new chemical compound. This rearrangement, however, affects the components of balata only in



PARA RECOVERY CO.'S PLANT—FRONT VIEW



PARA RECOVERY CO.'S MIXING ROOM.

ing mills, and 9 vacuum driers of the largest size. In addition to this, more machinery has been ordered, practically duplicating the present plant.

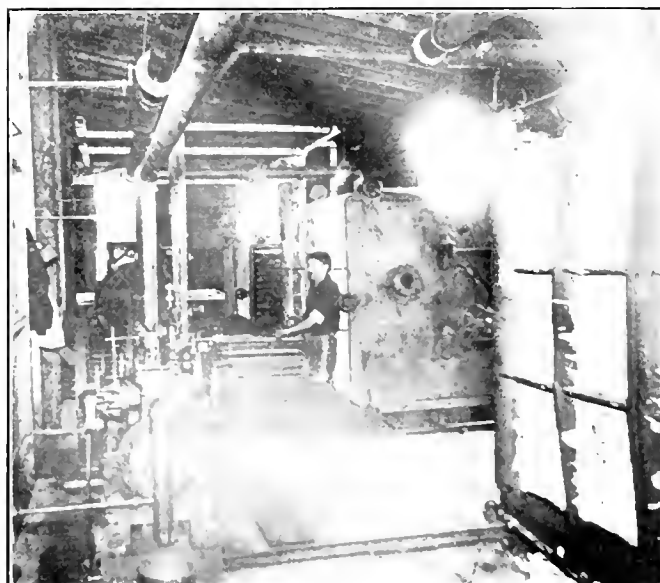
When Mr. Heyl-Dia showed the writer that he could take a hard slab of material looking like a piece of board and convert it into an elastic mass before his own eyes, there appeared to be in sight a new field of development in the chemical treatment of non-rubber or part-rubber gums. While the products turned out by Heyl-Dia earlier contained as a basis balata, which he converted only partly into rubber, it remained a secret how this was done, and the opinion prevailed that Mr. Heyl-Dia's claim to have produced rubber synthetically was not correct. The process used is of course a secret, but Mr. Heyl-Dia has patent applications partly granted, so that he is now in a position to make public and lay claim to the scientific part of the process

part, and the problem remained to force the balance of non-rubber hydrocarbons to yield to treatment.

A long series of experiments, not yet completed, on account of the newness and vastness of the field, have been carried on, and Mr. Heyl-Dia and his assistants have occupied their time in looking into the composition of certain low grade rubbers, the commercial value of which is lower than of balata. His attention was drawn to the guayule product, which he investigated for the Madero interests in Mexico, and he found that guayule contained a considerable quantity of terpenes, which,



PARA RECOVERY CO.'S WASHING ROOM.



PARA RECOVERY CO.'S DRYING ROOM.

according to his previous investigations, might be converted into rubber. The result is the patented process of converting guayule into what he calls "Mexican Yucatan."

The patents and processes were transferred by Mr. Heyl-Dia to the Para Recovery Co., of which he has taken charge. The output of Mexican Yucatan five months ago was about 800 pounds per day. The output a month ago was six times greater, and one firm alone took 100,000 pounds. From the results obtained commercially during this short period, Mr. Heyl-Dia believes that this product will continue to be appreciated by the rubber trade.

This development of the treatment of crude rubbers is a basic one and, as far as known to Mr. Heyl-Dia, the first attempt at producing a process rubber, accompanied by success. The product has a tensile strength of 30 per cent. above guayule, and is, comparatively speaking, the cheapest crude rubber in the market, comparing it with other medium grades.

It is understood that the conversion of other crude rubbers into more valuable products is taking shape, and there is a promise of developments in this branch that will open a new area in the preparation of crude rubbers.

G & J TIRE CO. LOSE A SUIT.

A TIRE patent decision of more than usual interest was rendered during the month, being the first that has been recorded in the suits for infringement brought by The G & J Tire Co., owners of the patents on tires of the Clincher type in America. It will be remembered that when the manufacture of these tires was begun in England by the American company, under patents granted to them abroad, the British courts were appealed to successfully to restrain such manufacture, on the ground that it infringed the patents of William Erskine Bartlett. The fight was a bitter one, and long drawn out, the final decision being rendered by the House of Lords. Similarly the efforts of the English manufacturers to introduce the Bartlett clincher tires into the United States were met by the G & J people with infringement suits which they won.

For several years past the G & J patents have been respected by most of the American tire manufacturers, and suits have been pending against those makers who declined to pay royalties. The suit just decided was that of "The Gormully & Jeffery Tire Co. vs. The Pennsylvania Rubber Co.," filed in May, 1905, in the United States circuit court for the western district of Pennsylvania. The decision was rendered by Judge Joseph Buffington at Pittsburgh, on September 9.

The suit charged infringement, in the manufacture of automobile tires, of four patents issued to Thomas B. Jeffery, and now owned by the plaintiff company, as follows:

- No. 454,115, issued July 16, 1891.
- No. 466,565, issued January 5, 1892.
- No. 523,314, issued July 17, 1894.
- No. 558,956, issued April 28, 1896.

The respondent contended that the patents were invalid and denied infringement, and, after a lengthy review of the various claims alleged to be infringed, the court holds "that no infringement of any of the patents is shown." The bill of complaint, therefore, was dismissed. The G & J Tire Co. have filed an appeal, which they hope will be argued this fall, with the prospect of a decision early in the spring.

Judge Buffington points out that all the patents here involved antedated the automobile art and contemplated use on bicycles. A pneumatic tire for vehicles embodies an inner inflatable tube, protected by a flexible sheath. The four patents all concern the engagement of such external sheath to the rim of the vehicle wheel. Taking up the first patent, the court discussed the wording of the claims regarding the hooked edges of the tire sheath and the corresponding hooks in the rim, reaching the conclusion that "if the disclosure of that patent comprised all the instruction

the tire maker of to-day, it is evident the art would not teach the method followed by both respondent and complainant in the manufacture of a modern automobile tire." The court is unable to construe this Jeffery patent, with its specific form of hook connection, so as to make it cover respondent's device. Not only does the latter differ from the description in the patent, but even the complainant has departed from the original hooked engagement, and follows the same method as the defendant.

It is stated—not in the decision of course—that during the taking of testimony in behalf of the Pennsylvania Rubber Co., an automobile tire was shown, made exactly in accordance with the specifications of the G & J patent No. 44,115. The respondent claimed that such a tire would not be practical; that it could only be mounted on or dismounted from the rim by a skilled mechanic. This contention was demonstrated, it is said, when it was found to be practically impossible to engage the beads of the tire with the hooks of the rim, on account of the shape of the latter.

In a statement emanating from the plaintiff's side since the decision was filed, it is intimated that to hold that the defendants do not infringe, means that neither the owners of the patent nor its licensees since the grant of the patents have ever manufactured the structure called for by the patents, because the clincher tire of the defendant is precisely the same as that which has been continuously manufactured by the G & J company and all its licensees.

* * *

THE suit brought by The G & J Tire Co. against the Michelin company was commenced by filing bill of complaint in the United States circuit court in the southern district of New York on September 21, 1904. The patents involved are the four mentioned in the preceding article and also No. 466,789, issued to Thomas B. Jeffery, on January 12, 1892, and No. 493,160, issued to W. Golding, March 7, 1893.

"RECORD SHIPMENT OF RUBBER."

UNDER the above heading *The Times of Ceylon*, of Colombo, dated June 28 last, reported:

"The *Gutenfels*, which left to-day for New York, took over 200 cases of rubber. Of this, Messrs. Crosfield, Lampard & Co. have alone shipped 190 cases."

This corresponds to an item in the reports of rubber arrivals at New York in THE INDIA RUBBER WORLD of September 1 (page 391), the steamer mentioned belonging to the Hansa Line, of Bremen, trading regularly between New York, Calcutta, and Colombo:

AUG. 12.—By the *Gutenfels*—Colombo:
A. T. Merse & Co.

*22,500

*Denotes Plantation Rubber.

This is not the first time that the same connection has been traced between shipments of rubber from the Far East, for such shipments are now becoming frequent. In the English rubber trade it has been possible for two or three years past to trace the shipment of large quantities of rubber, not merely from some forwarding house in the East, but from the plantations. For example, in the reported results of a recent London auction mention was made of 91 distinct lots of plantation rubber, with marks to indicate it as the product of 49 different plantations, the price realized in each case being given. It would be possible for one interested to go still further and trace a particular lot of rubber from the producer to the factory consuming it.

ACME Belting Co. (Phillipsburg, N. J.) were incorporated in March, 1907, under the laws of New Jersey, to manufacture cotton belting, fire hose, cordage, etc., with \$100,000 capital authorized. Two of the incorporators are Charles H. Halton, president, and Philip S. Dyer, secretary and treasurer of the American Horse Shoe Co., of Phillipsburg.

The Putumayo-Caqueta Rubber Concession.

THE references in recent numbers of THE INDIA RUBBER WORLD to the Amazon Colombian Rubber and Trading Co., and its concession in the regions of the Putumayo and Caquetá rivers, have elicited some correspondence between representatives of the two governments most closely interested. The questions at interest are best defined, perhaps, in two letters to the editor of the New York Times, which appeared in two issues of that newspaper during the past month. The two letters are reproduced below, together with the headings under which they originally appeared.

[FROM THE NEW YORK TIMES.]

RUBBER CONCESSION DISPUTED.

Land of Concessionaires Claimed by Peru as Well as Colombia.

TO THE EDITOR OF THE NEW YORK TIMES: I have read in THE INDIA RUBBER WORLD, edition of May 1, 1907, an article entitled "To Exploit Colombian Rubber," wherein it is stated that the Amazon Colombian Rubber and Trading Co. has filed articles of incorporation, with an authorized capital of \$7,500,000, and that the object of said corporation is to acquire and work rubber and timber resources controlled under a concession from the Republic of Colombia—an estimated area of 47,000 square miles, bounded in general by the Putumayo and Caquetá rivers, the waters of both of which reach the Amazon—which concession carries the exclusive rights of exploitation until 1930 and the right to acquire 80,000 hectares (197,680 acres) in fee simple anywhere within the limits of the concession.

I have also read in the same periodical, edition of September 1, 1907, another article, entitled "A Colombian Rubber Merchant," wherein a reference is made to a letter of mine addressed to the editor of THE INDIA RUBBER WORLD, in regard to which the said editor mentions that my government considers part of the lands covered by the concession to be comprised in that territory which is disputed between Colombia and Peru.

As most of these statements are quite misleading, and may be misapprehended, permit me to make public through your valued paper that the government of Peru, through its legation at Washington, has informed the Amazon Colombian Rubber and Trading Co. that the Peruvian government regards said concession as invalid inasmuch as it refers to a territory which is in dispute between Peru and Colombia, said dispute being now pending before an international court of arbitration; that the Peruvian government has been and is in actual possession of said territory, maintaining custom houses and collecting taxes; and that the territory is furthermore subject to a *modus vivendi* made some years ago between the government of Peru and Colombia, which provides that neither power should alter or disturb the *status quo* until the dispute between them as to the sovereignty of said region should be definitely settled.

I beg to also mention that my government has given notice to the department of state of the United States of the aforesaid communication made by it to said Amazon Colombian Rubber and Trading Co.

New York, September 6, 1907.

EDUARDO HIGGINSON,
Consul General of Peru.

[FROM THE NEW YORK TIMES.]

THAT RUBBER CONCESSION.

Statement of the Colombian Charge in Regard to Peruvian Claims.

THE following from the legation of the government of Colombia in Washington, D. C., has been communicated to the editor of *The Times* in regard to a recently published letter from Eduardo Higginson, consul general of Peru, in which that gentle-

man attacks the validity of the concession granted by the government of Colombia to Messrs. Caño, Cuello & Co.:

TO THE EDITOR OF THE NEW YORK TIMES: This legation is not aware that the government of Colombia has received any protest from Peru against the concession alluded to. Such protest should have been made jointly with that which Mr. Higginson asserts was made known both to the department of state of the United States of America and to the Amazon Colombian Rubber and Trading Co., by means of the Peruvian legation in Washington.

The *modus vivendi* between Colombia and Peru in regard to arbitration was signed in July, 1906, that is to say, one year and a half after the government of Colombia had granted the concession to Caño, Cuello & Co. (January, 1905), for the exploitation of a portion of the upper Putumayo territory, territory that Colombia claims and has always recognized as her own; consequently there is no foundation for the assertion made by the consul general of Peru that Colombia failed to maintain the *status quo* by granting said concession, which, as stated, was of prior date to the *modus vivendi*.

Inspired by the highest regards for all America, and to cut short all dispute with Peru, Colombia agreed to submit to an arbitration tribunal the question of Peru's pretensions to rights on the Putumayo; and even in case the result were favorable to Peru, that country would have to respect rights acquired by individuals and granted in good faith by Colombia.

I have made a report of this incident to my government, and especially of the statement of the Peruvian consul general that Peru is maintaining customs houses and collecting taxes in the disputed territory, since under the terms of the *status quo* invoked by the said consul general, the two nations, Colombia and Peru, agreed to withdraw all the officials and military force that they had there until the decision of the arbitrators.

I consider, therefore, that there is no reason whatsoever why this incident, which to my mind is of no importance, should cause any apprehension or lack of confidence on the part of the stockholders or others interested in the exploitation of the territory granted by Colombia to Caño, Cuello & Co.

J. M. PASOS,
Chargé d'Affaires *ad interim*.

Legation of Colombia, Washington, D. C., September 19, 1907.

MARKING RUBBER FOOTWEAR.

VENN'S Perfection Shoe Marker, which is in such general use in rubber shoe factories for marking soles with sizes and widths—which work may be done while the shoes are on the lasts or afterward—has been illustrated and described in various issues of THE INDIA RUBBER WORLD. The device is now

W13

referred to for the purpose of mentioning a modification of it which permits the use of much larger figures and letters than formerly, especially for marking heavy boots

and shoes or coarse soling. The size of the letters is shown here. These figures and letters are made of solid rubber and are fastened to the machine by a device that is warranted to hold until figures and letters are worn out. The marking paste is deposited on the surface of the figures by motion of the thumb, the same as on all other Venn markers. Mr. Venn is making standard markers which stamp shoes with both American and French sizes at one operation, if desired. The superintendent of one of the largest rubber shoe factories writes that these markers have been in satisfactory use in his factory for eighteen years, and adds: "We have never heard of any machine better, or even as good." [Frank Venn, P. O. box 76, Malden, Massachusetts.]

News of the American Rubber Trade.

AJAX-GRIEB RUBBER CO.'S ANNUAL.

THE annual meeting of shareholders of the Ajax-Grieb Rubber Co. was held at Trenton, New Jersey, on September 3, when formal approval was given to plans which have been prepared for extensive new buildings, which will add about 75,000 square feet to their factory floor space. The plans call for a three-story brick main building, with extensions; the reported cost is \$80,000, and it is intended to be the finest factory in Trenton. The location is on the west side of Olden street, the present plant being on the east side. The officers were reelected: Horace De Lisser, president; William G. Grieb, vice president; Harry Grieb, secretary and treasurer. The merger of the Ajax and Grieb rubber companies dates from September 10, 1906, and the results are declared to have been in every way satisfactory.

NEW BUILDING AT COLLEGE POINT.

THE Traun Rubber Co. (New York) are enlarging their factory at College Point by the addition of a four-story building, to be devoted to the manufacture of some of their rubber specialties. The new factory will also be equipped for making gutta-percha tissue. The company have been very busy throughout the past summer. Mr. William Schrader, treasurer of the company, lately returned from a three months' vacation in Europe. He reports the business outlook very bright in Germany, where all the manufacturers are very busy.

A NEW TILING CONCERN.

THE National Metal Back Rubber Tiling Co., of Philadelphia, have begun the manufacture, at Trenton, of their patented tiling, for which purpose they have leased from Philip McGrory, with the option of purchase, the factory at Beaks and May streets, occupied formerly by the Dyson Rubber Co. The Dyson company was incorporated in 1903, and their plant was purchased about a year ago by Mr. McGrory, who has considerably improved and enlarged it. The National Metal Back Rubber Tiling Co. are capitalized at \$500,000. C. Edward Hyke is the factory manager.

NEW SUBSTITUTE FACTORY.

ROBERT E. TYSON, of Bridgeport, Connecticut, mentioned last month as establishing a factory at Fairfield for making substitutes, advises THE INDIA RUBBER WORLD that the factory is about completed and the machinery installed. He has associated with him as superintendent L. C. Bullock, formerly with the Stamford Rubber Supply Co., who has had a long experience in the rubber and substitute business.

RUBBER INDUSTRY IN NEW JERSEY.

THE forthcoming annual report of the bureau of statistics of New Jersey will show that during 1906 there were 38 rubber factories in that state (which is taken to include rubber reclaiming plants), representing \$15,143,208 of capital. The average number of persons employed was 6,279, and the total of wages paid \$3,075,239. The cost value of materials used is stated at \$15,840,571, and the value of products \$22,824,737. The latter figure compares with \$20,210,024 for 1905. There were 2,562 male employes with weekly wages of \$10 or more.

SHOE FAIR IN CHICAGO.

THE second annual Shoe and Leather Market Fair held in Chicago at the Coliseum, from August 28 to September 4, was well patronized by the trade and the exhibits, covering about 33,400 square feet of floor space, were fairly representative of the interests to which the fair was devoted—boots and shoes and findings and all the grades of leather entering into footwear. The rubber shoe trade was represented both by manufacturers of footwear and by several houses marketing rubber heels. Displays

were made by the Hood Rubber Co., Apsley Rubber Co., and the Beacon Falls Rubber Shoe Co. of their standard lines of boots and shoes. Displays of heels were made by Morgan & Wright, whose booth contained a pyramid of 5,000 heels; by the Goodyear Tire and Rubber Co., who showed a non-slip sole as well as heels; by the Foster Rubber Co., and the Springfield Elastic Tread Co. The rubber trade was further represented by Eugene Arnstein, of Chicago, with an exhibit of cements.

NAUGATUCK. "THE RUBBER TOWN."

A BOOKLET descriptive of Naugatuck, Connecticut, issued recently by the board of trade of that town, begins with a brief sketch of Charles Goodyear, whose inventions while a resident there caused Naugatuck to become widely known as "the rubber town." The rubber shoe industry ranks first among local manufacturing interests, more shoes being made there than in any other town in the world, while a rubber reclaiming plant there is said to be the largest in existence. A variety of other rubber goods are made here, together with cotton fabrics for the rubber shoe trade, paper boxes used for packing rubber goods, and various manufactures of metals. The book includes views of the principal buildings, public and private, and altogether gives the impression that Naugatuck is an attractive town, as well as prosperous. As might be expected, the local rubber men form a good percentage of the board of trade.

MOTOR 'BUSES IN PHILADELPHIA.

THE Auto Transit Co. of Philadelphia have placed in commission on Broad and Diamond streets, in that city, twelve electric motor 'buses resembling the London type, and the vehicles lately introduced on the Fifth avenue, New York. [See THE INDIA RUBBER WORLD, August 1, 1907—page 355.] The Philadelphia 'buses are being well patronized, and the company plans to increase the number before long to 50.

DIVIDENDS DECLARED.

THE regular quarterly dividend of 1½ per cent. on the preferred shares of the Rubber Goods Manufacturing Co. was payable on September 16.

The directors of the Waterbury Co. (of New Jersey) have declared the regular quarterly dividend of 2 per cent. on the preferred stock and the regular quarterly dividend of 2½ per cent. on the common stock, payable October 1. The directors of the Waterbury Co. (of West Virginia) have declared the regular quarterly dividend of 1 per cent., payable October 1.

The regular monthly dividend of 1 per cent. on the common stock of the American Chicle Co. was payable September 20, and an extra dividend of 1 per cent., making 13 per cent. for the year.

The directors of the Consolidated Cotton Duck Co. declared the usual dividend of 3 per cent. upon the preferred stock, for the six months ended June 30, 1907, payable on October 1.

RUBBER MAN IN A RAILWAY WRECK.

THE New York *World's* report of the accident on the Boston and Maine railroad at West Canaan, New Hampshire, on September 15, in which 32 persons lost their lives, contains this paragraph: "Among the passengers was a young man in an undershirt and trousers, grimed from head to foot and very quiet. He was Talman H. Kieder, secretary and manager of the Merchants' Rubber Co., of Berlin, Ontario. He had done his part in the awful work of the dawn. One of the first out of the sleeper, he was abreast of the trainmen into the wreck, and as long as one living person had a chance of rescue he was in the front of the work, chopping and sawing, prying and helping until no more could be done for the living."

NEW INCORPORATIONS.

PNEU L'ELECTRIC Co., July 20, 1907, under the laws of New York; capital \$200,000. The company are the American branch of the Societe Industrielle des Telephones, of France, capitalized at 18,000,000 francs [= \$3,474,000], and largely engaged in making the "Electric" automobile tires, as well as the electrical insulation work in which they have so long been prominent. The American company will confine its attention to tires. Office: No. 1610 Broadway, New York.

Eureka Tire Compound Co., August 12, 1907, under the laws of Michigan; capital \$20,000. Incorporators: John Walters, Charles F. Murphy, and John J. Gaffill, Jr. Offices: No. 29 Atwater street, East, Detroit, Michigan. The company report: "We do not exploit any particular type of tire; all we do is replacing air in pneumatic tires with a compound that has met with good success."

The Springfield Tire and Rubber Co., May 8, 1907, under the laws of Ohio; capital \$50,000. Incorporators: H. L. Slager, D. K. Gotwald, W. H. Smith, J. W. Garnier, Eugene Garnier, A. W. Staley, and W. W. Ellsworth. This company succeeds a West Virginia corporation under the same name formed in 1903, and since operating a factory at Springfield, Ohio. THE INDIA RUBBER WORLD is informed: "There has been no change in our business, other than having the incorporation papers transferred from West Virginia to Ohio. This was done to save paying double taxes."

California Antioak Tire and Motor Co., June 14, 1907, under the laws of California; capital \$100,000. J. F. Weaver, president; Cory Hale, vice president; Milo H. Smith, secretary and general manager. The company has the rights in California for the Antioak leather tire and maintains offices and a garage at Los Angeles.

Safety Rubber Heel Co. has been incorporated under the laws of California, with \$25,000 capital, by F. B. Turpin, F. M. Wright, and C. I. Howe. The purpose is to make a non-slippable rubber heel, under United States patent No. 839,886, issued to Elbert G. Perkins, of Vallejo, Cal. The office of the new company is 925 Monadnock building, San Francisco; F. B. Turpin is secretary and treasurer.

The Multiplex Tube and Tire Co., July 24, 1907, under the laws of New Jersey; capital authorized, \$1,000,000. Incorporators: Horace W. Gallae, J. George Lotz, Frederick H. Hipple, and Kenneth K. McLaren. Registered office in New Jersey: No. 15 Exchange place, Jersey City.

The Newark Compressed-Air House Cleaning Co., July 25, 1907, under the laws of New Jersey; capital, \$25,000. Incorporators: William F. Conway, Patrick J. McDermott, and James Conway, all of Newark, N. J.

Empire State Tire Co., August 8, 1907, under the laws of New York; capital \$20,000. Incorporators: William F. McClurg, A. McClurg, and Sylvanus B. Nye. Sole state agents for New York state of the Lemon Greenwald patents for extensible tread pneumatic tires and puncture proof tire protectors. W. F. McClurg is secretary and treasurer, at 75 Erie County Bank building, Buf-

falo, N. Y. The Greenwald tire features were illustrated in THE INDIA RUBBER WORLD, July 1, 1907 (page 313).

Howard-Ramie Fibre Manufacturing Co., June 20, 1907, under the laws of New York; capital \$1,000,000. To manufacture fire hose and other articles from ramie fiber, and to utilize the gum recovered from the fiber as a substitute for rubber. Harry H. Howard-Howard, president; Edward C. Best, vice president and secretary; Adolph Hilderbrandt, treasurer. Office, No. 19 Park place, New York. The president of this company is also president and manager of the Howard Chemical Co., of New York.

Whelpley Rubber Works, Chicago, August 23, 1907, under the Illinois laws; capital \$500; to sell tires and rubber goods. Incorporators: George W. Yeoman, Richard T. Whelpley, W. E. Schroeder.

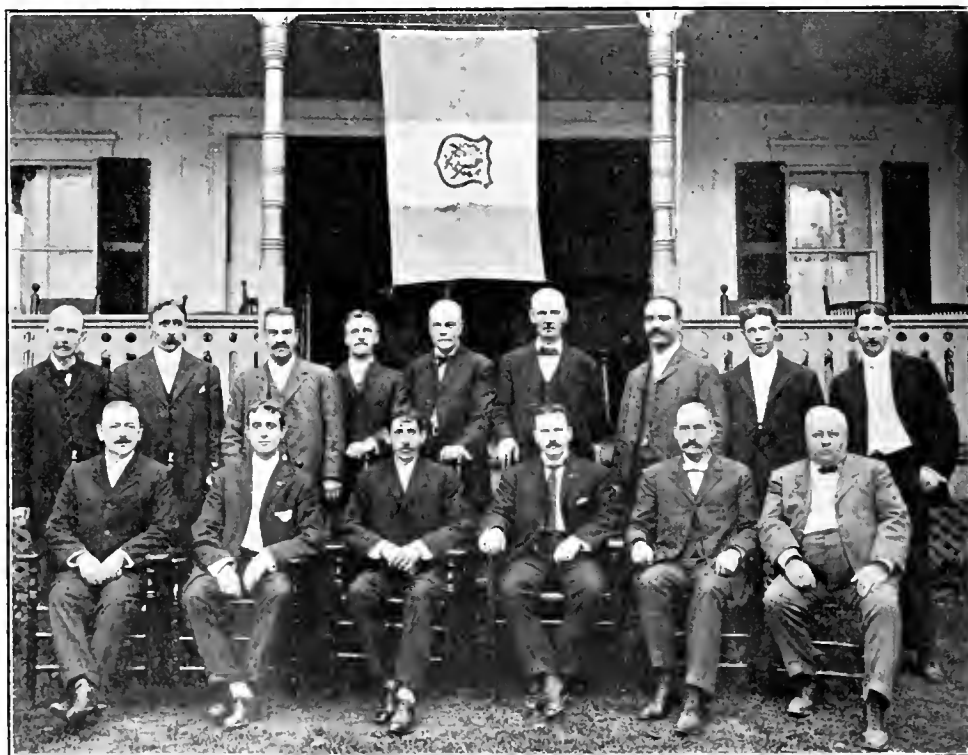
TRADE NEWS NOTES.

THE Peerless Rubber Manufacturing Co. (New York) announce the change of address of their agency at Buffalo, N. Y., from Nos. 43-45 Pearl street, to Nos. 379-383 Washington street.

The Fairfield Rubber Co. (Fairfield, Connecticut) report business quite active for the whole year past. The company have been putting in a patented stoker at their plant, to the marked satisfaction of their neighbors as well, since it avoids spreading black smoke from the factory chimneys. All the employees of the company were recently guests of President Harral at a clam-bake and outing, which was immensely enjoyed.

The Goodyear's India Rubber Glove Manufacturing Co. (Naugatuck, Connecticut) are reported to have completed lately an order for over 100,000 army blankets, and at present large orders are being received for automobile horn bulbs.

The Standard Underground Cable Co. (Pittsburgh, Pennsylvania) have located their Pacific coast headquarters permanently at 511 Shreve building, San Francisco, under the management of A. B. Saurman. The company's new factory at Oakland, California, is four times as large as the factory destroyed by fire in April of last year.



SHAREHOLDERS OF LA NUEVA PROVIDENCIA RUBBER CO.

[See report in THE INDIA RUBBER WORLD, September 1, 1907—page 388.]

[Those standing, counting from left to right, are Messrs. Carside, Warjin, Atwood, Kurze, Hazard, Whitmarsh, Faris, Goff, and Johnson. Those seated are Messrs. Spencer, Holmes, Gardner, Leo F. Nadeau, Cox, and Nadeau, Sr. The Guatemalan flag is suspended above the group.]

A NEW CHICLE COMPANY.

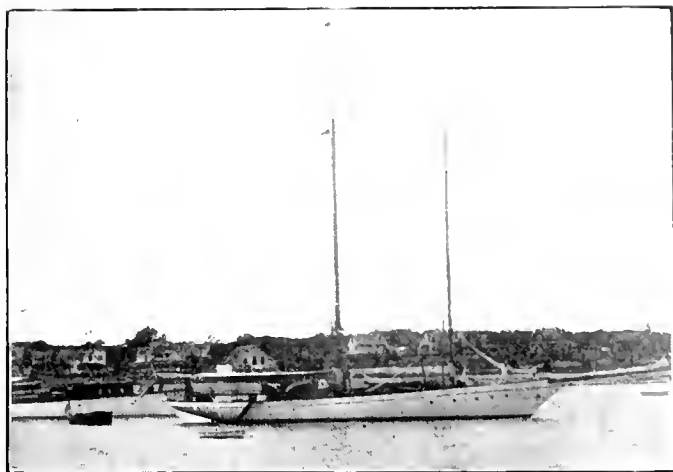
THE Case Chicle Co. was incorporated July 25, 1907, under the laws of New York; capital, \$100,000, fully paid. Incorporators: B. K. Peebles, Chicago; C. H. Stewart, Rochester, N. Y.; E. D. Halsey and L. L. Beach, Pittsburgh. The company is successor to a corporation of the same name, registered in New York April 7, 1905, having purchased its rights, franchises, etc., at private sale. Case Chicle Co. have their trade marks copyrighted, and their vending machines patented, and manufacture their chewing gum under a secret but not patented formula. They have no connection with the American Chicle Co., Factory and office: Nos. 8-11 Lundy's lane, Rochester, N. Y.

GOOD BUSINESS IN RAILWAY AIR BRAKES.

THE directors of the Westinghouse Air Brake Co. have recommended an increase in the capital stock from \$11,000,000 to \$14,000,000, and the payment of a 25 per cent. stock dividend from the increase, to be voted on by the stockholders at the annual meeting on October 1. The company's gross sales for the year ended July 31, 1907, amounted to \$11,230,410, against \$9,744,984 in the year before. Applied to dividends, \$2,475,000, against \$2,200,295 in 1905-06. The total amount available for dividends was equal to 35 per cent. on the capital stock; the dividends declared amounted to 20 per cent.

WEDDINGS ON A RUBBER MAN'S YACHT.

THE schooner rigged yacht *Whim*, owned by Mr. Charles H. Dale, president of the Rubber Goods Manufacturing Co., is shown in an accompanying illustration. The boat is 100 feet in length over all, and 70 feet on the water line. It has a large cabin, four



MR. C. H. DALE'S YACHT "WHIM."

large staterooms, and two baths. It has a 100 H.P. gasoline engine and develops a speed of 10 miles an hour; the boat is also a fast sailer under canvas.

Not a little romantic interest has attached of late to the *Whim*, on account of the celebration on it of two marriages, reports of which have appeared in the newspapers. The first occurred in August, off Block Island, when Miss Anna Seabury, of Montclair, New Jersey, who to that time had been private secretary to Mr. Dale, and Dr. P. D. Saylor, of New York, were married. Later, at Larchmont, Mr. Harris B. Senn, an employé of the Peerless Rubber Manufacturing Co. (of which Mr. Dale is also president), and Miss Minnie Kaesche, daughter of a New Yorker having a summer home at Larchmont, were married. Mr. and Mrs. Dale were present at both ceremonies.

THE FOOTWEAR TRADE IN CANADA.

THE factory of the Berlin Rubber Manufacturing Co., Limited, at Berlin, Ontario, has been closed. This company was or-

ganized in 1899 and has been engaged principally in making rubber footwear. In February last it passed under the control of the Canadian Consolidated Rubber Co., Limited. The Berlin company brands will continue to be marketed, but will be made at the factory of the Merchants' Rubber Co., Limited, also in Berlin and controlled by the Canadian Consolidated.

Jacob Kaufman has resigned the presidency of the Merchants' Rubber Co., Limited, which he helped to organize in 1903, after having been president of the Berlin Rubber Manufacturing Co. from its beginning. Mr. Kaufman is reported to be intending to establish a new rubber factory at Berlin, under the style Kaufman Rubber Co.

UNITED STATES RUBBER CO.

A PUBLISHED interview with an official of this company states: "Our company is doing an excellent business, and there are sufficient orders on our books, and those of our subsidiary companies, to keep the various plants running through the remainder of the current year at least; that is, through December, as our sales year commences January 1. Since the commencement of the new fiscal year, on April 1, the volume of business transacted is some millions of dollars ahead of the corresponding period of last year. The increase is due to greater operations in our various branches, including the tire and other departments."

BUSINESS TROUBLES.

THE Grand Rapids Felt Boot Co. (Grand Rapids, Michigan) lately applied for a receiver, at which time the creditors were informed that this step was made necessary by the absorption of the ready money of the company in constructing a large factory building to an extent that had been found to embarrass its operations. But a number of orders at profitable prices stood on their books, and it was thought that the factory can be kept running. The company states that at a fair valuation of their assets they are perfectly solvent. The Michigan Trust Co. were appointed temporary receivers, and later the appointment was made permanent. The principal creditors are two Grand Rapids banks and two crude rubber importing firms.

The firm of Goldberg & Rathman, prominent in the Boston waste rubber trade, at Nos. 289-293 Commercial street, have made an assignment to Samuel K. Casson, with liabilities reported at \$150,000, and available assets uncertain in extent, but probably not exceeding \$25,000. The partnership existing between Isaac Goldberg and Alfred H. Rathman was dissolved in April last, the business continuing under the old name, with Mr. Rathman at the head.

A RUBBER SHOE FACTORY CLOSED.

THE Globe Mills Rubber Co. (Lawrence, Massachusetts) have ceased operations, and the machinery and raw material in stock have been sold to W. C. Coleman Co., who are removing the same to make room for a woolen mill. The Globe Mills Rubber Co. was incorporated early in 1905, organized with Loring M. Monk president, and engaged in the making of rubber footwear. Work was continued until during the past summer.

TRADE NEWS NOTES.

THE New York offices of the American Congo Co. have been removed from No. 35 Nassau street to No. 111 Broadway, the headquarters of the Continental Rubber Co. The offices in Brussels are at 5A, Rue du Congres.

Justus D. Anderson has resigned the presidency of The G & J Tire Co. (Indianapolis, Indiana), in order to be able to devote himself more closely to the affairs of the Hartford Rubber Works Co., of which he is also president. B. C. Dowse has been elected president of the G & J company. The latter company has established a branch at Buffalo, New York, at No. 912 Main street, in charge of Frank Berrodin.

Traver Blowout Patch Co. (No. 1265 Broadway, New York), whose tire repairing device was described in THE INDIA RUBBER WORLD June 1, 1907 (page 276) have established distributing agencies in several American cities and in Paris, France.

POPE MANUFACTURING CO.'S AFFAIRS.

DURING the past month the creditors of the Pope Manufacturing Co., the assignment of which was reported in our issue of September 1 (page 386), have been busy investigating the condition of the company, with that of the subsidiary, The Pope Motor Car Co., with results thus far satisfactory. A committee of creditors has been formed, under the chairmanship of George A. Yule, of the Badger Brass Manufacturing Co., of Kenosha, Wisconsin. Meetings have been held in Chicago and elsewhere, and it is reported that, after conferences with Mr. Albert L. Pope, receiver for the two companies named, an agreement has been reached to the effect that the business is to be continued and that no action is to be taken by the creditors before November 1, if at all. The committee had the idea at first of securing the appointment of co-receivers to work with Mr. Pope, but were convinced by that gentleman that such action might be inadvisable. Should the committee, by November 1, favor the appointment of co-receivers, it is understood that Mr. Pope will not oppose their appointment. The business of the companies is being conducted at an apparent profit. A list of the creditors with claims amounting to \$1,000 or more includes Continental Rubber Works, \$2,077.19; The Fisk Rubber Co., \$1,557.88; The G & J Tire Co., \$5,768.31; Goodyear Tire and Rubber Co., \$1,296.51; The Hartford Rubber Works Co., \$10,092.88; total, for five rubber companies, \$21,332.77.

A LITTLE SWINDLE IN RUBBER.

AN important concern in the rubber trade in New York has received letters from some of the Southern states, the writers of which have purchased from traveling agents the right to sell, within specified territory, certain patented rubber goods, on representation that the goods were made by the New York house referred to. The procedure has been to sell for \$200 per county the "rights" under United States patent No. 426,042, issued April 22, 1890, to Charles Mudford, of Texarkana, Texas, for "Pads for the backs of horses." This patent seems to have been disposed of to one Josh Kirby, who in July, 1906, appointed W. C. Nicholson and W. M. Longley his "sole agents and attorneys." It is the latter or their representatives, who have been selling "county rights" under the patent. After paying their money the purchasers of such rights seem to have lost sight of the vendors. The patent above mentioned expired on April 22, 1907. The representations with regard to any goods made under it were in every way fraudulent. The peripatetic agents at times made use of a printed circular of the "Southern Pneumatic Rubber Co., manufacturers of collars, pads, mattresses, and buggy cushions, Box 283, Little Rock, Arkansas." A letter sent to this address by THE INDIA RUBBER WORLD could not be delivered.

TRADE NEWS NOTES.

L. E. WATERMAN Co. (New York) are represented in the Manufactures and Liberal Arts building at the Jamestown exposition, where they have a booth in which the manufacture of their fountain pens is carried on in full view of the public.

Southern Rubber Works, No. 146 Jefferson avenue, Memphis, Tennessee, are running a pneumatic tire repair shop and are agents for the Firestone automobile tires.

E. Kingdom & Co., of Manaus, Brazil, are successors to Reeks & Aslett in the crude rubber trade in that city, and are represented in New York by Edmund Reeks & Co., No. 117 Pearl street.

Mr. Thomas Melloy, Jr., manager of the Gandy Belting Co. (Baltimore, Maryland), was a passenger on a steamer which sailed on September 12 from Seattle, Washington, for the Orient.

The state charter board of Kansas has granted a charter to The Great Western Rubber Co., at Olathe, mention of which was made in THE INDIA RUBBER WORLD of September 1 (page 386). The company is capitalized at \$200,000, and among the purposes named in the charter is reclaiming rubber by a new process.

TRADE NEWS NOTES.

THE Stamford Rubber Supply Co., manufacturers of rubber substitutes, at Stamford, Connecticut, have filed with the authorities of that state a certificate of increase of capital, from 100 shares of common stock to 200 of preferred and 300 of common, making a total of \$50,000, par value. The purpose is to cover the cost of the up to date plant which the company were mentioned as intending to build, in THE INDIA RUBBER WORLD of September 1 (page 387).

At the annual meeting of the shareholders of The Sweet Tire and Rubber Co. (Batavia, New York), held on August 21, the board of directors was reelected, as follows: Messrs. J. H. Ward, A. W. Caney, Lewis Benedict, A. A. Smith, and G. E. Perrin. The directors after organization reelected the officers, as follows: John H. Ward, president; Ashton W. Caney, vice president; George E. Perrin, secretary and treasurer.

At the annual meeting of the Flexible Tire Co. (Springfield, Massachusetts), on August 26, the officers were reelected: William G. Marr, president; Dr. James P. Hillard, secretary; and Richard J. Talbot, treasurer. The company was incorporated May 15, 1906, to manufacture an automobile wheel having a sectional rubber tread and an inner metal rim containing sockets and sliding spokes or pistons, combined with which is a system of springs at the outer end of the spokes.

Mr. Eben H. Paine, whose going to London as resident director there of the United States Rubber Co. was mentioned in THE INDIA RUBBER WORLD July 1, 1907 (page 321), appears not to have had an opportunity thus far to get settled in the British metropolis, judging from reports which reach his friends at home of his visits to Barcelona, Athens, and Constantinople, not to mention interior trade centers on the Continent. When last heard from Mr. Paine was leaving for London on another business tour, to consume five weeks, from which he has not yet returned.

The Chicago Rubber Shoe Co. has filed with the secretary of state of Illinois a certificate of decrease of capital to a nominal amount, on account of the incorporation (March 15, 1907) of the Chicago Rubber Co., which is doing business at the same location—Nos. 153-159 Franklin street—with E. G. Stearns, president and treasurer of the first named company, sustaining the same relation to the new corporation.

PERSONAL MENTION.

DR. WILLIAM M. HABIRSHAW, of the India Rubber and Gutta Percha Insulating Co. (New York), whose departure for Europe we reported in June, has returned with his health fully recovered.

Mr. Elston E. Wadbrook, of the Boston house of Poel & Arnold, returned early in the month from a brief vacation in England.

Major J. Orton Kerbey, for some years United States consul at Pará, where he made a special study of rubber interests, on which he has written at length in consular reports and in the columns of THE INDIA RUBBER WORLD, has accepted a position in the offices of the International Bureau of the American Republics, at Washington. Major Kerbey has traveled extensively in the South American rubber regions, some of his observations on which are recorded in his book, "The Land of To-morrow."

Mr. A. R. Duryce, of the Calmon Rubber Works at Hamburg, sent remembrances to his friends in America—where he lived formerly—from Ostseebad, at Dahme in Holstein, where his summer vacation was spent.

At the annual golf tournament on the Lake Mohawk links, Ulster county, New York, the first prize was won by Augustus O. Bourn, Jr., of Bristol, Rhode Island—score 68; play 18 holes; contestants 16. The second prize was won by W. H. King, of Detroit—score 72.

Mr. Ben T. Morrison, of L. C. Chase & Co. (Boston), and Mrs. Morrison spent the latter part of the summer visiting London and the principal continental cities.

UNITED STATES RUBBER CO.'S ISSUES.

NEW YORK Stock Exchange transactions for four weeks ending on the dates given herewith:

COMMON STOCK.

Week	Sept. 2	Sales	835 shares	High	33	Low	29
Week	Sept. 9	Sales	950 shares	High	33½	Low	31
Week	Sept. 16	Sales	1,300 shares	High	32	Low	28½
Week	Sept. 23	Sales	100 shares	High	29½	Low	29½
For the year—High, 52½, Feb. 16; Low, 27½, Aug. 13.							

FIRST PREFERRED STOCK.

Week	Sept. 2	Sales	1620 shares	High	90¾	Low	86¾
Week	Sept. 9	Sales	1313 shares	High	93¾	Low	90¾
Week	Sept. 16	Sales	1955 shares	High	93¾	Low	88¾
Week	Sept. 23	Sales	955 shares	High	90¾	Low	89¾
For the year—High, 109¾, Jan. 7; Low, 85, Aug. 20.							

SECOND PREFERRED STOCK.

Week	Sept. 2	Sales	120 shares	High	60	Low	59½
Week	Sept. 9	Sales	200 shares	High	61½	Low	61
Week	Sept. 16	Sales	100 shares	High	61	Low	61
Week	Sept. 23	Sales	550 shares	High	61¾	Low	61
For the year—High, 78½, Jan. 7; Low, 60, Aug. 15.							

NEW ALLING RUBBER STORES.

THE Alling Rubber Company, incorporated September 3, 1907, under the laws of Maine, with \$25,000 capital paid in, has been formed to operate a store at Worcester, Massachusetts (the headquarters of the company), and the Alling rubber stores already open at Norwich and New London, Connecticut. The officers are Wilber S. Alling, of Norwich, president; Charles H. Adams, of Worcester, secretary, and Ward T. Alling, of New London, treasurer. The Alling rubber stores syndicate now conduct ten or more stores in different towns in Connecticut and Massachusetts.

TRADE NEWS NOTES.

THE Aluminum Flake Co. (Akron, Ohio) are reported to have contracted with a single rubber manufacturing concern to deliver a minimum of 44,400 pounds of their product each month for fifteen months, or a total of 532,800 pounds during the period named.

W. D. Allen Manufacturing Company (Chicago) are already at work upon lawn sprinklers for next season, and have designed some new types. Orders for garden hose are solicited in August and September of every year for the following season, and jobbers begin to place orders for sprinklers at the same time.

A newspaper report of the incorporation of the Thompson-Adams Rubber Co., in Philadelphia, was an error. The company referred to is the Thompson-Adams Leather Co.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE leading rubber manufacturers of Akron were extensive exhibitors at the Implement, Vehicle and Harness show held in Cincinnati the last week in September. The Goodrich and Diamond companies made the largest exhibits, and the Firestone company had a splendid representation. The National Carriage Dealers' show which is to open in the Grand Central Palace, New York, on October 7, will also have extensive exhibits by Akron manufacturers.

Convinced that the demand for automobile tires is to increase steadily, Thomas L. Childs, an Akron promoter, is engaged in organizing a company for the manufacture of automobile tires alone. He says that his plans are not yet in shape for a more definite announcement.

The Diamond Rubber Co. are just completing the largest factory building in the city of Akron, and will occupy the new structure by November 1. The building is to be used to afford more room for the tire department, and also to accommodate the Marsh rim factory, which will be moved to Akron upon the completion of the structure. The building is six stories high and will add five acres to the company's present floor space.

The Firestone Tire and Rubber Co. are contemplating the erection of a new factory building which will materially increase their capacity. The new building will be the second addition to the plant in the last few months, and, as now planned, will be equal in dimensions to the main building and three stories in height.

A. H. Noah, treasurer of the Diamond Rubber Co., is spending a month's vacation in Europe.

A Boston newspaper says: "One of the handsomest speed launches in Marblehead harbor is the *Florence II.*, launched this summer by her owner, Mr. A. H. Marks of Akron, Ohio, who is at the Ticknor cottage, Marblehead Neck. She is a splendid sea boat and has a speed of 21 knots."

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE condition of the rubber goods market in this city during the summer has been quite different from the conditions in most other lines. The demand for rubber goods of all kinds has been exceptionally active, and all the houses in this branch seem to have done a good business. But other houses, particularly in the retail trade, have felt the effect of the depression in business caused by the street car strikes and other labor troubles. Of late a marked improvement in the general tone of business has been apparent, and merchants of all classes declare that the worst is over and are looking forward to a prosperous season's trade. It is hardly necessary to add that the rubber houses share this hope in a particular degree.

During the absence of Mr. D'Arcy, head of the D'Arcy-Scott Co., dealers in tires and automobile supplies at No. 524 Golden Gate avenue, on an automobile transcontinental tour, his house had the assistance in the selling department of Mr. E. R. Kelly, who had come out from the East as an automobile salesman. While participating in an automobile race recently Mr. Kelly met with an accident, from which his death resulted on September 16. During his stay in San Francisco Mr. Kelly had become generally known in the local tire trade, and no one was better liked than he.

The Phoenix Rubber Co., who report a very satisfactory trade in all lines of rubber goods, have taken the Pacific coast agency for the tires of The Republic Rubber Co., of Youngstown, Ohio.

The manager of the W. D. Newerf Rubber Co. reports that the street car strike during the summer greatly increased the tire business. There were many business men who simply had to get about the city, and when they could not longer depend upon the street cars they used automobiles. This situation is believed to have encouraged the sale of automobiles to a great extent, and all of this helped the rubber tire houses in the end.

Mr. R. H. Pease, of the Goodyear Rubber Co., on his return from Portland, says that business in Washington, Idaho, and Oregon is in fine condition. "It looks," he said, "as though we would have a better business than ever before on the Pacific coast, because the crops are larger than ever."

Rubber Scrap Prices.

NEW YORK prices—in cents per pound for carload lots—are practically unchanged:

Old rubber boots and shoes—domestic.....	117½@12
Old rubber boots and shoes—foreign.....	11 @ 11¼
Pneumatic bicycle tires.....	7½@ 7¾
Automobile tires.....	67½@ 10
Solid rubber wagon and carriage tires.....	10 @ 10¼
White trimmed rubber.....	12½@ 12¾
Heavy black rubber.....	5¾@ 6
Air brake hose.....	4¾@ 5
Fire and large hose.....	35½@ 3¾
Garden hose.....	2½@ 2¾
Matting.....	1½@ 1¾

Review of the Crude Rubber Market.

THE market continues without life, in spite of the fact that the factories all seem busy, and in the absence of large visible supplies. It is pointed out by sellers that much of the work in hand at the factories is based upon orders given some time ago, and the indisposition of consumers to buy rubber freely is due to uncertainty of future trade conditions. Not that there is any definite financial trouble in sight, but rather a feeling of caution in the way of expanding business pending legislative or judicial action in reference to the great corporate interests of America. It is true that rubber prices have declined abroad, but on account of the large percentage of the world's rubber supply that is consumed in the United States, rubber prices everywhere are to a certain extent determined by conditions in this country. As will be seen, current quotations for Pará grades have declined materially during the month, and prices of other grades to a less extent. This fact is causing some manufacturers to buy Pará sorts for purposes for which they have, for some years past, used Africans.

The monthly Antwerp sale, on September 10, resulted in something of a surprise to the trade. Of the 663 tons offered about 513 found buyers, and although many lots of mediocre quality were embraced, the average prices realized showed an advance of 5 centimes per kilogram over the prices at the August sale.

Arrivals at Pará of all grades, including caucho, for July and August were 2930 tons, against 3330 last year and 2750 for the same months in 1905. Arrivals in September, to the 18th, were 1135 tons.

Following is a statement of prices of Pará grades, one year ago, one month ago, and September 28—this date:

PARÁ.	Oct. 1, '06.	Sept. 1, '07.	Oct. 28.
Islands, fine, new.....	119@120	105@106	99@100
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	123@124	110@111	106@107
Upriver, fine, old.....	126@127	113@114	110@112
Islands, coarse, new.....	67@68	59@60	59@60
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	@92	80@90	88@89
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet....	75@76	70@71	69@70
Caucho (Peruvian), ball.....	91@92	88@89	85@86
Ceylon, fine, sheet.....	142@143	133@134	129@130

AFRICAN.

Sierra Leone, 1st quality.....	98@99	Lopori ball, prime.....	—@—
Massai, red.....	98@99	Lopori strip, prime.....	95@96
Benguella.....	68@69	Madagascar, pinky.....	82@83
Accra flake.....	17@18	Ikelemba.....	—@—
Cameroon ball.....	74@75	Soudan niggers.....	85@86

CENTRALS.

Esmeralda, sausage....	83@84	Mexican, scrap.....	83@84
Guayaquil, strip.....	69@70	Mexican, slab.....	62@63
Nicaragua, scrap.....	82@83	Mangabeira, sheet.....	55@56
Panama, slab.....	62@63	Guayule.....	44@45

PARA RUBBER VIA EUROPE.

	POUNDS.
August 26.—By the <i>Patricia</i> =Hamburg:	
Rubber Trading Co. (Fine)	5,500
August 31.—By the <i>Campania</i> =Liverpool:	
New York Commercial Co. (Fine)	9,000
September 4.—By the <i>President Lincoln</i> =Hamburg:	
New York Commercial Co. (Fine)	18,000
September 5.—By the <i>Advance</i> =Mollendo:	
New York Commercial Co. (Fine)	15,000
New York Com. Co. (Coarse)...	1,500 16,500
September 7.—By the <i>Prins Frederick</i> =Bellevue:	
G. Amsinck & Co. (Fine).....	3,000
G. Amsinck & Co. (Coarse).....	6,000 9,000
September 12.—By the <i>Waldsee</i> =Hamburg:	
New York Commercial Co. (Fine)	15,000

SEPTEMBER 18 By the *Caronia*=Liverpool:

New York Commercial Co. (Fine)	57,000
Robinson & Stiles. (Fine).....	5,000
Livesey & Co. (Coarse).....	3,500 65,500
September 18.—By the <i>Sigissemund</i> =Mollendo:	
W. R. Grace & Co. (Caucho)	35,000

OTHER ARRIVALS AT NEW YORK.

August 24.—By the <i>Mexico</i> =Frontera:	
Harburger & Stark.....	6,500
E. Steiger & Co.....	3,500
Thibaud Brothers.....	1,000
Graham, Hinkley & Co.....	1,000 12,000
August 26.—By the <i>Matanzas</i> =Tampico:	
New York Commercial Co.....	95,000
Continental-Mexican Rubber Co.	*67,000
Edward Maurer.....	*35,000
Poel & Arnold.....	*30,000 227,000

EAST INDIAN.

Assam.....	93@94	Borneo.....	37@38
Late Pará cables quote:			
Per Kilo.		Per Kilo.	
Islands, fine.....	58\$150	Upriver, fine.....	58\$725
Islands, coarse.....	28\$750	Upriver, coarse.....	48\$725
Latest Manao's advices:		Exchange.....	15 1/4d.
Upriver, fine.....	58\$875	Exchange.....	15 1-32d.
Upriver, coarse.....	38\$875		

NEW YORK RUBBER PRICES FOR AUGUST (NEW RUBBER).

	1907.	1906.	1905.
Upriver, fine.....	\$1.08@ \$1.15	\$1.22@ \$1.24	\$1.27@ \$1.29
Upriver, coarse.....	.80@ .92	.90@ .92	.90@ .92
Islands, fine.....	1.04@ 1.09	1.18@ 1.20	1.25@ 1.27
Islands, coarse.....	.60@ .62	.65@ .67	.68@ .70
Cameta, coarse.....	.66@ .69	.68@ .70	.71@ .73

Manaos:

ARRIVALS FOR JULY.

	1907.	1906.	1905.
Rubber.....	tons 408	751	586
Caucho.....	101	143	88
Total.....	509	894	674

ARRIVALS FOR AUGUST.

	1907.	1906.	1905.
Rubber.....	tons 1164	934	863
Caucho.....	232	94	98
Total.....	1396	1028	961

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

SEPTEMBER 3.—By the steamer <i>Madareuse</i> , from Manao's and Pará:				
IMPORTERS.	Fine.	Medium.	Coarse.	Total.
General Rubber Co.....	33,200	6,700	43,000	12,600= 96,400
Edmund Reeks & Co.....	21,100	3,200	24,500	58,800
Hagemeyer & Brunn.....	22,500	7,000	10,800	43,300
Poel & Arnold.....	16,000	14,000	9,200	39,900
New York Commercial Co.....	9,500	9,500	9,500	18,700
A. T. Morse & Co.....	9,600	1,600	11,200	11,200
Neale & Co.....	7,000	7,000	7,000	7,900
Total.....	96,400	27,500	120,200	221,100= 266,200
SEPTEMBER 14.—By the steamer <i>Coaruse</i> , from Manao's and Pará:				
Poel & Arnold.....	57,800	17,300	10,400	85,500
General Rubber Co.....	2,700	2,100	85,800	90,600
Edmund Reeks & Co.....	20,000	2,800	16,500	39,300
New York Commercial Co.....	1,100	7,900	4,000	37,700
Neale & Co.....	11,800	2,800	2,000	16,200
Hagemeyer & Brunn.....	11,800	5,300	17,100	17,100
A. T. Morse & Co.....	2,900	300	6,600	9,800
Total.....	302,900	69,500	192,900	11,400= 666,700
Total.....	108,100	33,200	131,200	23,700= 296,200

[NOTE.—The steamer *Polycarp*, from Pará, is due at New York on October 2, with 385 tons of rubber.]

August 26.—By the *Flandria*=Honduras:

A. Saunders & Co.....	3,500
Hahn, Sohler & Co.....	2,500
A. Rosenthal Sons.....	1,500
Eggers & Heimbach.....	1,500
G. Amsinck & Co.....	1,500
Bartling & De Leon.....	1,000 11,500

August 26.—By the *Momus*=New Orleans:

A. T. Morse & Co.....	3,000
Manhattan Rubber Mfg. Co....	4,500 7,500

August 27.—By the *El Norte*=Galveston:

Continental-Mexican Rubber Co.	*22,500
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August 27.—By the *Armenian*=Liverpool:

A. Hirsch & Co.....	2,500
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August 27.—By the *Finance*=Colon:

W. Loazia & Co.....	5,500
West Coast Rubber Co.....	2,500
Jose Julia & Co.....	1,500
G. Amsinck & Co.....	1,500

CENTRALS—Continued.

Henry Mann & Co.	1,000	
Meyer & Hecht	1,000	13,000
August 28.—By the <i>Jouchen</i> =Columbia:		
G. Amsinck & Co.	3,000	
D. A. DeLima & Co.	1,500	
A. C. Coleman	1,000	
A. Held	1,000	
Escobar & Gorgorza	1,000	
Luzarte & Whitney	1,000	8,500
August 30.—By the <i>Colon</i> =Colon:		
G. Amsinck & Co.	9,000	
Hirzel, Feltman & Co.	9,000	
Demarest Bros. Co.	4,500	
Isaac Brandon & Bros.	3,500	
New York Commercial Co.	3,000	
L. Johnson & Co.	2,500	
A. Santos & Co.	2,500	
Roldau & Van Sickle	2,500	36,500
August 31.—By the <i>Monterey</i> =Frontera:		
E. Steiger & Co.	4,000	
H. Marquardt & Co.	6,500	
Harburger & Stack	1,000	6,500
September 3.—By the <i>Carmania</i> =Liverpool:		
Geo. A. Alden & Co.	9,000	
September 30.—By the <i>El Mar</i> =Galveston:		
Continental-Mexican Rubber Co.		*22,500
September 30.—By the <i>Prins Frederick</i> =Colon:		
A. M. Capens' Sons	2,000	
G. Amsinck & Co.	1,000	
A. Rosenthal & Sons	1,000	4,000
September 4.—By the <i>Manzanillo</i> =Tampico:		
Continental-Mexican Rubber Co.	45,000	
Edward Maurer	45,000	
N. Y. Commercial Co.	22,000	
Poel & Arnold	18,000	130,000
September 4.—By the <i>Siberia</i> =Columbia:		
A. Held	1,500	
M. Blancho	1,500	
I. Brandon & Bros.	1,500	
De Lima, Cortessa Co.	1,000	5,500
September 5.—By the <i>Advance</i> =Colon:		
G. Amsinck & Co.	18,000	
Aramburu & Co.	4,500	
Escobar & Gorgorza	1,500	
Ochoa & Osorio	1,000	
Maldonado & Co.	1,000	
Piza, Nephews Co.	1,000	24,000
September 5.—By the <i>Carib II</i> =Ceiba:		
Eggers & Heimlein	11,500	
H. W. Peabody & Co.	1,500	
Wessels, Kulenkampff & Co.	1,000	14,000
September 5.—By the <i>Rayano</i> =Tampico:		
New York Commercial Co.	40,000	
Rensch & Helde	25,000	65,000
September 6.—By the <i>Camouca</i> =Bahia:		
Poel & Arnold	25,000	
General Rubber Co.	11,500	30,500
September 6.—By the <i>Merida</i> =Vera Cruz:		
Graham, Hinkley Co.	1,500	
H. Marquardt & Co.	1,000	
Harburger & Stack	1,000	3,500
September 10.—By the <i>Panama</i> =Colon:		
G. Amsinck & Co.	12,000	
New York Commercial Co.	3,500	
Hirzel, Feltman & Co.	1,500	
Henry Mann & Co.	1,500	
Wessels, Kulenkampff & Co.	1,000	10,500
September 10.—By the <i>El Dorado</i> =New Orleans:		
Manhattan Rubber Mfg. Co.	1,500	
G. Amsinck & Co.	1,000	2,500
September 11.—By the <i>Augusta Wilhelm</i> =Columbia:		
G. Amsinck & Co.	2,000	
Fould & Co.	2,000	
A. Held	1,000	
American Trading Co.	1,000	
A. F. Hanaberg	1,000	
A. D. Straus & Co.	1,000	8,000
September 13.—By the <i>Proetus</i> =New Orleans:		
A. N. Rotholz	2,000	
A. T. Morse & Co.	1,000	
Eggers & Heimlein	1,500	4,500
September 13.—By the <i>Morro Castle</i> =Frontera:		
H. Marquardt & Co.	2,500	
Harburger & Stack	1,500	
Strube & Ulze	1,500	
E. Steiger & Co.	1,000	6,500
September 13.—By the <i>Corrientes</i> =Bahia:		
Poel & Arnold		6,500
September 16.—By the <i>Vigilancia</i> =Tampico:		
New York Commercial Co.	*80,000	
Edward Maurer	*25,000	
Continental-Mexican Rubber Co.	*25,000	
Poel & Arnold	*15,000	145,000

CENTRALS—Continued.

SEPTEMBER 16.—By the <i>Dunottar</i> =Colon:		
L. Johnson & Co.	4,500	
G. Amsinck & Co.	4,000	
Henry Mann & Co.	3,500	
Demarest Bros. & Co.	3,000	
George A. Alden & Co.	2,000	
Isaac Brandon & Bros.	2,000	
Andreas & Co.	1,500	
Kunhardt & Co.	1,500	
Hirzel, Feltman & Co.	1,500	
Pablo, Calvet Co.	1,000	
Roldan & Van Sickle	1,000	
West Coast Rubber Co.	1,000	
Graham, Hinkley Co.	1,000	
Bartling & DeLeone	500	28,000
SEPTEMBER 18.—By the <i>Sigmond</i> =Colon:		
L. Johnson & Co.	4,000	
American Trading Co.	1,500	
A. M. Capens' Sons	1,500	
W. R. Grace & Co.	1,500	
G. Amsinck & Co.	1,000	9,500
SEPTEMBER 19.—By the <i>Sarnia</i> =Colombian ports:		
Kunhardt & Co.	4,500	
A. Held	3,500	
Isaac Brandon & Bros.	2,000	
Ochoa & Osorio	1,500	
Brummer, Mobile Co.	1,500	
Escobar & Gorgorza	1,000	
G. Amsinck & Co.	1,000	
Roldan & Van Sickle	1,000	16,000

*Thus sign in connection with imports of Centrals denotes Guayule rubber.

AFRICANS.

August 24.—By the <i>Pretoria</i> =Hamburg:		
Poel & Arnold	25,000	
A. T. Morse & Co.	5,500	
George A. Alden & Co.	6,500	37,000
Aug. 26.—By the <i>Vaderland</i> =Antwerp:		
Poel & Arnold	67,000	
A. T. Morse & Co.	60,000	
George A. Alden & Co.	45,000	
General Rubber Co.	9,000	
Joseph Cantor	8,000	
H. A. Gould Co.	2,000	191,000
Aug. 27.—By the <i>Armenian</i> =Liverpool:		
George A. Alden & Co.		7,000
Aug. 29.—By the <i>Patricia</i> =Hamburg:		
Livesey & Co.	17,000	
General Rubber Co.	22,500	
George A. Alden & Co.	11,500	
W. L. Gough & Co.	7,000	
Raw Products Co.	3,500	61,500
Aug. 30.—By the <i>Balti</i> =Liverpool:		
Poel & Arnold	11,500	
Livesey & Co.	3,500	15,000
Sept. 3.—By the <i>Kroonland</i> =Antwerp:		
Poel & Arnold	75,000	
A. T. Morse & Co.	9,000	84,000
Sept. 3.—By the <i>Carmania</i> =Liverpool:		
General Rubber Co.	22,500	
Raw Products Co.	4,500	27,000
Sept. 4.—By the <i>President Lincoln</i> =Hamburg:		
General Rubber Co.	38,000	
Poel & Arnold	22,500	
A. T. Morse & Co.	20,000	
George A. Alden & Co.	14,000	94,500
Sept. 5.—By the <i>Adriatic</i> =Havre:		
George A. Alden & Co.	11,000	
Livesey & Co.	10,000	21,000
Sept. 6.—By the <i>Cedric</i> =Liverpool:		
General Rubber Co.	45,000	
Sept. 9.—By the <i>Gasconne</i> =Havre:		
Poel & Arnold		35,000
Sept. 10.—By the <i>Zeiland</i> =Antwerp:		
H. A. Gould Co.	2,500	
George A. Alden & Co.	2,000	
General Rubber Co.	1,500	
Rubber Trading Co.	3,500	9,500
Sept. 11.—By the <i>Mesaba</i> =London:		
Robinson & Stiles	4,500	
Livesey & Co.	4,500	9,000
Sept. 12.—By the <i>Waldsee</i> =Hamburg:		
Poel & Arnold	13,500	
A. T. Morse & Co.	11,500	
Rubber Trading Co.	6,000	31,000
Sept. 14.—By the <i>Celtic</i> =Liverpool:		
Poel & Arnold	5,500	
Raw Products Co.	5,500	
A. W. Brunn Co.	3,500	
General Rubber Co.	3,500	18,000
Sept. 17.—By the <i>Statendam</i> =Rotterdam:		
A. T. Morse & Co.		22,500
Sept. 18.—By the <i>Coronia</i> =Liverpool:		
George A. Alden & Co.	7,000	
General Rubber Co.	5,500	
Livesey & Co.	5,500	18,000

AFRICANS—Continued.

SEPT. 19.—By the <i>Pennsylvania</i> =Hamburg:		
Livesey & Co.	11,500	
W. L. Gough Co.	2,500	14,000
EAST INDIAN.		
Aug. 23.—By the <i>Lindenfels</i> =Colombo:		
A. T. Morse & Co.		*8,000
Aug. 24.—By the <i>Pretoria</i> =Hamburg:		
W. L. Gough Co.		*3,500
SEPT. 3.—By the <i>Minnehaha</i> =London:		
George A. Alden & Co.		*3,000
SEPT. 11.—By the <i>Mesaba</i> =London:		
Robinson & Stiles	*3,500	
General Rubber Co.	2,500	6,000
SEPT. 12.—By the <i>Tautonic</i> =London:		
A. T. Morse & Co.		*2,500
SEPT. 14.—By the <i>Philadelphia</i> =London:		
Poel & Arnold		5,500
SEPT. 16.—By the <i>Aragona</i> =Singapore:		
Poel & Arnold	13,500	
George A. Alden & Co.	5,000	18,500
SEPT. 17.—By the <i>Pandana</i> =Singapore:		
Joseph Cantor	40,000	
Poel & Arnold	11,500	
W. L. Gough Co.	11,500	
H. Pauli & Co.	5,000	
George A. Alden & Co.	5,000	73,000
SEPT. 20.—By the <i>Reichenfels</i> =Colombo:		
A. T. Morse & Co.		*10,000

*Denotes Plantation Rubber.

GUTTA-JELUTONG.

Aug. 26.—By the <i>Norman Prince</i> =Singapore:		
Heabler & Co.		400,000
SEPT. 16.—By the <i>Aragona</i> =Singapore:		
Heabler & Co.	260,000	
W. L. Gough Co.	200,000	
M. Jochemsen	175,000	
George A. Alden & Co.	100,000	
Poel & Arnold	110,000	
H. Pauli & Co.	55,000	900,000
SEPT. 17.—By the <i>Pandana</i> =Singapore:		
H. Pauli & Co.	125,000	
Poel & Arnold	105,000	
Heabler & Co.	150,000	
M. Jochemsen	70,000	
W. L. Gough Co.	100,000	
George L. Alden & Co.	50,000	660,000
GUTTA-PERCHA.		
Aug. 20.—By the <i>Patricia</i> =Hamburg:		
Robert Soltan & Co.		7,000
SEPT. 4.—By the <i>President Lincoln</i> =Hamburg:		
Robert Soltan & Co.		7,000
SEPT. 16.—By the <i>Aragona</i> =Singapore:		
H. Pauli & Co.	30,000	
Poel & Arnold	22,000	
Winter & Smillie	5,000	57,000
SEPT. 10.—By the <i>Pennsylvania</i> =Hamburg:		
Robert Soltan & Co.		7,000

BALATA.

Aug. 23.—By the <i>Grenada</i> =Trinidad:		
Frame & Co.	3,500	
G. Amsinck & Co.	1,000	4,500
Aug. 28.—By the <i>Korona</i> =Demerara:		
George A. Alden & Co.	27,000	
A. T. Morse & Co.	7,000	
Frame & Co.	3,000	37,000
SEPT. 7.—By the <i>Prins Frederick</i> =Ciudad Bolivar:		
SEPT. 10.—By the <i>Maracas</i> =Trinidad:		
Middleton & Co.		25,000
Frame & Co.	5,000	
G. Amsinck	5,000	10,000
SEPT. 10.—By the <i>Manoa</i> =Demerara:		
George A. Alden & Co.		13,500
SEPT. 20.—By the <i>Prins Willem</i> =Surinam:		
Middleton & Co.		20,000

CUSTOMS HOUSE STATISTICS.

PORT OF NEW YORK—AUGUST.

Imports:	POUNDS.	VALUE.
India-rubber	3,400,599	\$2,384,127
Balata	172,664	91,931
Gutta-percha	13,600	7,063
Gutta-jelutong	2,980,868	152,000
Total	6,630,821	\$2,630,720
Exports:		
India rubber	182,386	\$150,606
Reclaimed rubber	82,816	11,700
Rubber Scrap Imported	2,282,807	\$184,022



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OCTOBER 1, 1907.

No. 1.

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Liverpool:

WILLIAM WRIGHT & Co. report [September 2]:

Fine Para.—Owing to financial unrest and a consequent poor trade demand, prices have gradually declined during the month, and close fully 3d per pound easier for Upriver, and 2d per pound for Islands. Spot demand has been dull, but a fair business done for delivery. Prices in Para and Manáos have, as usual, been much higher than in the consuming markets, but there are indications that the present low rates ruling in Europe and America are having due effect. Trade is good, but the future trend of prices will practically be governed by the state of the money market, especially in New York.

EDMUND SCHLUTER & Co. report [August 31]:

Para grades opened quiet, and the decline referred to in our last circular continued under pressure to sell, unfavorable reports from the United States, and generally reserved attitudes of consumers. The estimates of receipts for September show no increase over those of September, 1906. On the other hand, with trade conditions as at present reported, no large receipts would appear to be required. Prospects are very uncertain, but at the lower prices now ruling there is a somewhat better demand.

WORLD'S VISIBLE SUPPLY OF PARA, AUGUST 31.

Tons	1907.	1906.	1905.	1904.	1903.	1902.
.....	3010	2448	1866	1402	1970	2902
Prices, hard, fine. 4/7	5/2	5/2	5/7	5/—	4/3	3/1½

LIVERPOOL STOCKS OF AFRICAN RUBBER, AUGUST 31.

	1907.	1904.	1901.
.....	247	459	626
1906.	372	305	610
1905.	323	449	459

Statistics of Para Rubber (Excluding Caucho):

		NEW YORK.		Total		Total	
		Fine and Medium.		Coarse.		1907.	
		Tons		Tons		1906.	
						1905.	
Stocks, July 31.....	Tons	227	63	290	147	417	
Arrivals, August.....		274	213	487	723	445	
Aggregating.....		501	276	777	870	862	
Deliveries, August.....		330	201	537	777	546	
Stocks, August 31.....		165	75	240	93	616	
		PARA.		ENGLAND.			
		1907.		1906.		1905.	
Stocks, July 31.....	Tons	165	376	240	675	790	390
Arrivals, August.....		1380	1505	1230	450	460	690
Aggregating.....		1545	1941	1470	1125	1250	1080
Deliveries, August.....		1255	1491	1195	500	550	700
Stocks, August 31.....		290	450	275	625	700	380
World's visible supply, August 31.....	Tons	1702	1876	1534			
Para receipts, July 1 to August 31.....		2470	2865	2480			
Para receipts, Caucho, same dates.....		460	485	220			
Afloat Para to United States, August 31..		124	218	87			
Afloat Para to Europe, August 31.....		513	415	476			

OFFICIAL STATISTICS OF RUBBER (in Pounds).

UNITED STATES.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1907.....	4,180,184	416,286	3,772,898
January-June.....	42,588,027	2,245,536	40,342,491
Seven months, 1907	46,777,211	2,661,822	44,115,389
Seven months, 1906	38,207,158	2,079,678	36,127,480
Seven months, 1905	42,382,481	1,834,536	40,547,945
GERMANY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1907.....	2,441,120	1,193,940	1,247,180
January-June.....	18,814,400	6,208,400	12,606,000
Seven months, 1907	21,255,520	7,402,340	13,853,180
Seven months, 1906	23,006,500	6,511,780	16,494,720
Seven months, 1905	26,284,060	8,455,700	17,828,360
FRANCE.*			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1907.....	2,321,880	1,215,280	1,116,600
January-June.....	17,325,220	11,149,380	6,175,840
Seven months, 1907	20,054,100	12,364,660	7,689,440
Seven months, 1906	19,702,540	10,229,340	9,473,200
Seven months, 1905	16,462,820	9,477,820	6,985,000
BELGIUM.†			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1907.....	1,463,068	1,463,068	858,812
January-June.....	9,384,112	6,171,832	3,212,280
Seven months, 1907	19,705,992	7,634,900	4,071,092
Seven months, 1906	12,666,926	7,880,391	4,786,535
Seven months, 1905	10,172,439	7,314,076	2,858,363
GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
July, 1907.....	6,244,560	3,894,128	2,350,432
January-June.....	41,866,048	20,536,432	21,329,616
Seven months, 1907	48,110,608	24,430,560	23,680,048
Seven months, 1906	39,959,104	21,530,096	17,529,008
Seven months, 1905	37,510,776	20,445,720	17,074,056

NOTE.—German statistics before Jan. 1, 1906, include, gutta-percha, Balata, old (waste) rubber. British figures include old rubber. French figures include gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

*General Commerce.

†Special Commerce.

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Edited by HENRY C. PEARSON—Offices, No. 35 West 21st Street, NEW YORK.

Vol. XXXVII. No. 2.

NOVEMBER 1, 1907.

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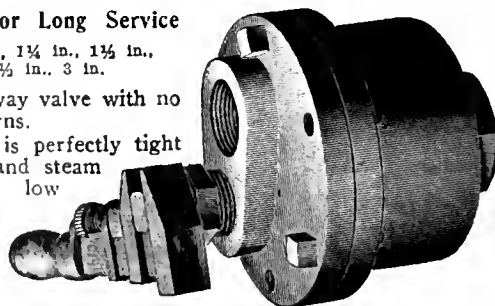
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STANDARDIZATION OF TIRES.

NOWADAYS, when a great "department store" undertakes to supply practically every want of the buying public, the full page advertisements of these establishments are among the most interesting features of the newspapers, such is the variety of the wares described day after day, and the skill employed in wording the announcements. Not the least notable feature of such advertisements is that they are honest, so that they become an important record of development of current taste and manners. All of which has been suggested to the writer of these lines by glancing at random over one of these advertisements, in which the word "tires" happens to appear prominently.

In the case in point the merchant announces "We handle only first quality tires, including such standard grades as"—and then follows a list in which appear impartially the names of certain American and European makes that would be acknowledged in any automobiling club in Christendom to be "good tires." No "freaks" in this list, no cheap goods, no unknown brands. Our object in referring to this particular advertisement—after stating that it is in no sense exceptional in New York store announcements—is to note that it indicates the standardization of the automobile tire. As everybody knows, the leading tire patents in America are expiring, as they have expired already in Britain, while France never granted any patents covering some important types

of tires. What concerns "the man in the street" is whether a certain tire is a good one, and not who made it. The fact that it is offered by a reputable house is his principal guarantee as to quality, though if he has a preference for a particular brand of note, the up-to-date department store will supply it.

Whoever buys a pair of shoes to-day depends upon his own judgment as to the quality, or upon the reputation of the house from which he buys, far more than upon the maker's brand. Shoes are shoes, and one shoe as good as another—that is, in a reputable shop. The same thing is becoming true of the automobile tire, and because the leading makers of the tires have been honest in their work; each has attempted to do his best work, and each has succeeded equally well with his competitors, so that even the novice may feel that he will not go far wrong if he goes to a well established dealer to buy tires, though it be to a department store. But as we have said, if he wants a particular English or German or American or French tire, the store in question will sell it to him, as announced in the same advertisement with automobiles complete or baby rattles or luncheon baskets or grand pianos or lead pencils.

The tire makers have done marvelously well on the whole, and the best evidence is that their products no longer require a maker's guarantee to sell them.

OVERPRODUCTION OF RUBBER.

A QUESTION which is much discussed among rubber planters in British Asia, and even more among the thousands of British investors in plantation companies, is whether there is danger of overproduction. This is a very practical question, and deserving of all the attention that it has received, because the world is not yet rich enough to spend millions of money in promoting any enterprise without assurances that it will not be thrown away.

There may be some encouragement in the fact that history has recorded so few examples of "overproduction." Every grower of wheat or cotton or cucumbers, for example, may not always find a profitable or even a ready sale for his crops, but it can hardly be said that, on the whole, overproduction of any of these commodities has ever occurred. It is true that when the cultivation of quinine bark was once begun, so many persons engaged in it on a large scale that the rate of profit declined to an extent that caused some of the planters to retire from the field. Yet probably more quinine is produced now than any time in the past, and it is reasonable to suppose that it pays the producers, or they would stop gathering the stuff. Similarly, it was a common thing a few years ago, in the United States, to hear that cotton was no longer a paying crop, but the production has increased steadily in amount, and in years of largest production prices have ranged higher than in former times, and the cotton planters are becoming a wealthy class.

It may be said, by the way, that quinine is hardly a necessity in the sense that cotton and rubber are, because substitutes for it can be more readily named. In any event no one is apt to use quinine who can avoid it, whereas millions of people are anxious to acquire or use more cotton and rubber than they can now obtain, or pay for. This fact alone should be a sufficient guarantee to the doubtful that overproduction of rubber is not likely to occur. And so long as rubber—or any other commodity—is a real necessity of life, it is going to pay somebody to produce it.

Still, it may be argued that it must be possible to plant too much rubber, and that it is only wise to stop planting this side the danger line. To this it may be answered that, while surprising yields have been gained on some plantations, and while the same trees seem to yield more and more rubber every year, the number of cultivated trees now yielding is insignificant compared with the actual consumption of rubber. There are, it is true, some millions of younger trees, planted some years later than the trees now producing rubber, so that they will not be tappable for some time to come, when without doubt the total demand for rubber will have been greatly increased, while the native supplies will have been lessened. Any trees which may be planted hereafter will be still longer in coming to maturity, so that overproduction at least does not seem to us imminent.

A point of more immediate interest is that the intending investor in existing plantations should convince himself (1) that the trees he is asked to pay for can be accounted for and (2) that he does not pay too much for them.

THE COTTON SITUATION.

THERE has been at no other time, perhaps, such a widespread interest in the cotton situation, from so many viewpoints, as at present. The attempt to extend cotton growing to new localities is more general than ever before, and is being conducted more extensively, on more practical lines, and with greater promises of success. While there is nothing in prospect to suggest the loss of American supremacy in cotton production, enough has happened to point out to American growers the wisdom of becoming prepared for competition in some important respects.

The activity in extending cotton areas has been prompted by the higher price level for cotton which has prevailed for several years and still shows no tendency to decline. Manufacturers are clamoring for lower priced fiber, and the prices available encourage the investment of capital in new planting enterprises, while the more intelligent colonial administrations of modern times are anxious to develop cotton growing as a feature of the development of the regions under their control. Ultimately some of these undertakings are bound to prove profitable, especially as the situation on the whole is one

to develop more economical methods of production than have been practised in the southern United States in the absence of competition abroad.

At this moment the growers in these States are busy forming organizations for mutual benefit, but their chief motive appears to be the forcing of consumers to pay more for cotton. No one can complain of the growers for seeking the highest possible prices for their produce. But in the end prices are regulated by the general law of supply and demand, which prevents an artificial level from being long maintained. But now that the importance of concerted action is becoming recognized by the cotton growers, they may ultimately conclude to use the power of organization to so improve their methods that their labor will produce relatively larger returns than now, even at a lower price per pound of cotton.

To hold cotton out of the market, as is now attempted, will only stimulate production elsewhere, and hasten an era of lower prices for cotton generally. The international cotton conferences which have been held lately are likely to be of general benefit in bringing about the discussion of other features of the cotton situation than the sole matter of prices, with the result that the grower may get more money per unit of labor employed, and at the same time give the consumer more cotton for each dollar expended, regardless of where the cotton is grown.

WHY NOT A SPECIAL PATENT COURT?

THE keynote of a report made to the American Bar Association recently by a committee of its members was thus stated: "A United States patent ought to have the same legal force and meaning everywhere within its borders. But it has not at the present time." It happens that throughout the United States there are judges having primary jurisdiction, in the federal judiciary system, before whom may be brought actions at law relating to alleged infringement of patents. Decisions by these judges may be appealed from to district appellate courts, of which there are several, while the court of last resort—which may be reached only after a case has been carried through the two grades here noted—is the United States supreme court.

It has happened that the same patent has been held valid in some of these courts of "first instance" and invalid in others, a court of this rank not being influenced even by the decision of an appellate court in another district, and as a patent case cannot as a rule reach the supreme court without several years' delay, it will be seen that not a little confusion may exist as to the validity—and the commercial value—of any patent which may have been infringed. It is true, we believe, that a single decision, in one of the smaller jurisdictions, usually suffices to determine the validity of a patent, but this is not always the case.

The recommendation of the Bar Association's committee is in favor of one United States court of patent

appeals, to which cases might be carried at once from any court of first instance, thus shortening the procedure for arriving at a definite pronouncement in any particular action. This suggestion, all the details of which have not been set down here, appears to us to have merit, and we doubt not that it will be heard from further.

At the same time a further suggestion might well have a hearing. It is for the creation of a board of experts in connection with patent cases. It is our impression that in France such a board exists, which is called upon to take cognizance of all cases of patent litigation before a final decision is reached, whereas in the Bar Association committee's recommendation it is provided that the patent court of appeals shall be organized from the judges for the time being sitting in the United States circuit courts.

There comes to mind the pertinent suggestion in an English contemporary, that whereas even an eminent barrister may decline a retainer in a patent infringement case, on the ground that he is not familiar with patent law, he would not decline to render a decision in the same case should he chance to be elevated to the bench before the case was finally disposed of. It has occurred to ourselves—and without any reflection upon our very learned judges—that the outcome of a patent suit is about as uncertain as the result of a horse race, and it appears only reasonable that a court of experts should be able to render more satisfactory opinions in the class of cases under consideration than often result from the haphazard judicial system now in vogue in most countries.

RUBBER WILL BE FAR FROM THE LEAST important and interesting feature of the many automobile shows, the season for which is just beginning. By the way, the question might be asked why, when the streets are constantly crowded with automobiles, people still go to exhibition halls to see them. At least one advantage of the "show" is that the cars there are not likely to run over people.

ITALY'S GREAT RUBBER FACTORY, described on another page, not only supplies a large home demand for goods, but devotes an important share of its capacity to export trade. This is true of not a few other rubber factories in Europe, so great is the consumption of rubber goods in countries which as yet have no factories in this branch. While American exports of rubber goods continue to increase, it can hardly be said that this country has its share of outside trade, besides which the imports of such goods also continues to increase.

IT MUST BE ADMITTED THAT RUBBER CULTURE has passed the experimental stage when one studies the results attained by Mr. Rutherford, of London, of whom a sketch appears on another page, and considers that, while he has accomplished more than some of his plantation neighbors, the difference is a matter of quantity only and not of quality.

THE ROYAL AUTOMOBILE CLUB of England, in carrying out such a comprehensive series of trials of commercial motor cars as that which ended during the month, has placed a proper estimate upon this class of vehicles. Such cars are becoming a real necessity in modern life as compared with pleasure vehicles of any type, and while the R. A. C. trials involved no study of tire conditions, we take it that those rubber manufacturers are

wisest who give the most serious attention to planning the best possible tires for commercial vehicles.

AND STILL THE LAYING OF OCEAN CABLES goes on—two new ones to connect New York with countries to the southward within the past few weeks. While both were financed by American capitalists, it does not seem that any American manufacturer was able to profit in any way from these enterprises.

THE RETURN OF THE BICYCLE to some degree of popularity serves to emphasize the truism that whenever rubber has been put to any practical use, that use of it never ceases. It did seem for awhile as if the bicycle tire formed an exception to the rule.

HIGH ESTIMATE OF PATENT VALUES.

THE annual report (1907) of the board of directors to the shareholders of the Westinghouse Electric and Manufacturing Co., signed by George Westinghouse, president, contains the following paragraphs in relation to the patents owned by the company or in which they are interested:

"Your company is the possessor of a large number of patents and of licenses under a still greater number by virtue of an agreement with the General Electric Co., made March 31, 1896. It may be said that these patents and licenses are the very foundation of the business of both companies. Their cost cannot be computed, because in addition to the large sums paid in cash, the development of the apparatus and systems covered by them have involved manufacturing, engineering, and legal expenses which have been constantly charged to current operations.

"The active patents of the two companies to-day, by purchase and as the result of development in their factories, greatly exceed the number covered by the patent agreement of 1896, and their value is even greater in proportion because of the enormous increase of the business protected.

"Almost every detail of the entire product of both companies is dependent upon the use of some one or more of the many thousand patents jointly owned, the right use of which should be worth an average of at least 10 per cent. on the value of the apparatus manufactured and sold under their protection. If this right of use be computed at only 3 per cent., a figure neither company could afford to accept from other manufacturers, the aggregate annual work of these patents would be \$3,000,000 on the present output of the two companies, which, if capitalized on a 10 per cent. basis would make a gross value of \$30,000,000 for all of the patents of both companies.

"The large sums expended in the acquirements of patents, in their upkeep, and in the development of apparatus covered by new patents, coupled with the fact that the value of the new patents constantly being acquired exceeds the value of those expiring, constitutes the equivalent of an important annual depreciation."

NOT ADMITTED AS SCRAP.

AN importation of old telegraph cable at New York was claimed to be free of duty as old copper fit only for manufacturing, or as junk. The samples and evidence showed that the cables had been imported in lengths of more than 2,000 feet and consisted of about 12 small copper wires grouped around one large copper wire, and all covered with an insulating material somewhat like gutta-percha. They were said to be the condemned parts of a submarine cable and meant to be cut up, the covering of the wire to be sold as scrap gutta-percha and the wire as scrap copper. The United States general appraisers held that, whatever the purpose of the importer, the merchantable character of the article was clearly shown by the evidence, and its classification by the collector of the port as a manufacture of copper wire was affirmed.

Standardization of Electric Lighting Materials.

AT the seventh annual convention of the National Electrical Contractors' Association of the United States one of the principal addresses was by Mr. C. M. Goddard, representing the Underwriters' National Electrical Association, who dwelt at length upon the "Factory Inspection Service" which for two years past has been maintained successfully. Mr. Goddard was identified closely with the formation of the Underwriters' national association and of the national electrical code. Referring to the development of the code as it now exists, the speaker quoted from the first printed rules regarding insulation issued in this country (in 1881), two of which were:

"Wires to be thoroughly insulated and doubly coated with some approved material.

"All wires to be securely fastened by some approved nonconducting fastening."

There has not always been uniformity of interpretation or application of the rules, either when in the earlier and briefer forms, or now when the national electrical code fills a book of 150 pages, but progress is being made all the time in the direction of uniformity. But there was a matter apart from the letter of the code which the speaker defined clearly when he said: "I believe it is fully as necessary that you contractors make it your business to always use fittings and materials which have been carefully examined and found to meet all requirements as it is to follow the code in your work of installing such devices and materials." Following are other extracts from Mr. Goddard's address:

WORK OF STANDARDIZATION.

"Our laboratories have lately made a very decided step in advance along this line of approved devices, which as it is further developed will, I think, be recognized as of great advantage to all users of electrical apparatus. It is known as 'Factory Inspection Service,' and has, I am glad to say, apparently met with cordial approval and coöperation from the great majority of the reputable manufacturers.

"It was started in connection with the manufacture of rubber covered wire as the 'Wire Inspection Bureau' [See THE INDIA RUBBER WORLD, September 1, 1905—page 398.] and has since been extended by the laboratories to other electrical products, such as conduit, etc., as well as to fire protection devices, such as chemical extinguishers, watch clocks and the like; it will in the near future be further extended and it is expected that eventually it will include the whole list of approved devices.

"Arrangements are made with as many of the manufacturers, say of approved rubber covered wire, as desire to be included, by which it is first ascertained that they have the proper factory facilities for the manufacture and testing of rubber covered wire and that their 'shop practice' is generally good—in other words, that they can produce a standard article.

"Then, in order to assure ourselves that they will produce a standard article, we employ a corps of inspectors whose duty is to periodically visit all of these factories as often as circumstances demand, say once or if necessary twice a week, for the purpose of looking over the factory and its product, making tests of coils selected at random, checking up the tests made in the factory and satisfying themselves that the entire output is being kept up to standard.

STAMPED GOODS.

"To such manufacturers as show good results, stamps are sold at so much per 500 feet of wire, and you are undoubtedly all familiar with the 'Wire Inspection Bureau' stamps that have been for some time attached to the tags on approved rubber covered wire, although you may not have known just what they meant.

"If an inspector finds that the product of any factory is frequently below standard, then the stock of stamps on hand, if any, is taken up and that factory can purchase no more stamps until the trouble is remedied and the product again brought up and kept up to standard.

"The cost of this service is covered by the sale of stamps, each manufacturer thereby contributing in proportion to his output, and it is gratifying to be able to say that the price of stamps has been twice almost cut in two since the service was started, so that to-day it cuts no figure at all in the selling price of the wire.

"This service you will readily see partakes very largely of the nature of the engineer who supervises the manufacture of all commodities under large government contracts, and gives you, as users of such goods, the benefit of knowing that you are getting what you are paying for, and this without any added expense.

"As this service is extended you will be able, by insisting on 'stamped' goods, to be sure that whatever you buy is what it is represented to be."

FACTORY INSPECTION SERVICE.

Another address of importance was that of Mr. Hugh T. Wrecks, secretary of the Wire Inspection Bureau already mentioned. He said that electric lighting was at first welcomed by the insurance people as being safer than other illuminants then in use, but after some costly fires this confidence in the safety of electricity was destroyed. In spite of all the work done to restore confidence, many fires are still caused by electric lighting installations, caused either (1) by use of defective material, or (2) defective installation, or (3) carelessness in handling, or by any or all of these. The principal interest of those who support the Wire Inspection Bureau is to eliminate as much as possible the fires due to the first of these causes. In the early struggles of the organization in behalf of higher grades of material, the active resistance was encountered of manufacturers, jobbers, and contractors, and the support of the insurance interests was very indifferent. But gradually all of this has been changed, and coöperation on the part of all those classes is becoming the rule.

After recounting the earlier methods of seeking the standardization of supplies, and the maintenance of high grades of products, and their very limited success, Mr. Wrecks said:

"In 1905 a happy conception was arrived at, that much better results could be accomplished through factory inspection service carried on continually, in place of the intermittent field inspection of sample goods previously obtained, and to start this service manufacturers of rubber covered wire were approached with this end in view, and the Wire Inspection Bureau was formed and factory inspection service started on rubber covered wire.

"In rapid succession other services were started, until to-day factory inspection is an established fact on rubber covered wire, flexible cord, rigid conduit, flexible tubing and insulating joints, and as soon as minor details are adjusted, will be established on various other electrical fittings. As is to be expected, the service has many friends and others who criticize same. I think the criticisms are due more to misunderstandings and to lack of recognition of the conditions the service is struggling against, and what the service really means, rather than to any opposition against factory inspection label service *per se*.

"One plea that has been made against the service is that it unnecessarily increases the cost of the goods themselves, but a little reflection will show this not to be an item of consideration when it is considered that in no case does the cost of inspection amount to more than one per cent. of the selling price of the goods, and generally it is appreciably less than one per cent., and the increased cost, if any, caused by factory inspection service is in

every case due to the fact that previous to inspection service the goods were not being manufactured up to the standard under which they were sold."

The Wire Inspection Bureau, referred to in the preceding paragraphs, is affiliated with the Underwriters' Laboratories, and has headquarters in the new Engineering building, No. 29 West Thirty-ninth street, New York, with branches in other cities.

ALUMINUM FOR ELECTRIC CONDUCTORS.

THE continued high price of copper, while the cost of producing aluminum is constantly being lessened, has tended to call increased attention of late to the merits of aluminum as a metal for electric conductors. While an aluminum wire must have, compared with copper, a section increased by .63 per cent. and a diameter increased by .28 per cent., there is a saving in weight of 50 per cent. in favor of aluminum. An aluminum line from Niagara Falls to Buffalo, transmitting 15,000 H.P. at 22,000 volts, has been in service for three years, having been put up to replace a copper line. In the original line the spans were 75 feet, but with aluminum the spans have been extended to 112½ feet, thus saving 33 per cent. in poles. The use of aluminum for electric cables is extending in Britain as well as in America, one indication of which is the recent issue by Johnson & Phillips, Limited, of a catalogue of such cables made by them.

A NEW INSULATING PITCH.

A NEW insulating material is a by product of Coalite, a fuel prepared from coal under the patents of Thomas Parker, the issue of which in Great Britain is numbered 14,365 (1906). All rights under this invention have been transferred by Parker to an English company, Coalite, Limited, who in turn have sold the English rights to British Coalite Co., Limited, floated recently in London with £2,000,000 [= \$9,733,000] capital. At present gas manufacturers put in good class of coal into brick retorts and at a high temperature distil from it gas and by products, and have coke as a residual. By Mr. Parker's method, it is stated, almost any grade of bituminous coal can be treated; it is placed in iron stills, at a comparatively low temperature, and after the distillation a hard, dense, smokeless fuel remains, which has been named coalite. This new fuel is adapted for domestic and industrial purposes, and in addition to being cleanly and smokeless, it is superior to other coal in that a greater percentage of its calorific energy is converted into useful heat. It is said that the gas produced is less in quantity but richer, and that the tar products are nearly double in quantity and far more valuable than the by products from ordinary gas making.

The pitch produced is referred to as being of a particularly high grade, and possessing excellent qualities for electrical work where high insulation is required. By regulation of the degree of distillation the pitch can be manufactured either in a soft condition ready for use in the insulation troughs, or as a hard brittle brick fit for transportation and easily softened by the addition of some of the creosote oil, which is another by product of Parker's system. Parker's applications for patents in the United States and Germany, it is stated, have been allowed. The directors of British Coalite Co., Limited, are connected with the steel and colliery interests, with the exception of Sir William Henry Preece, K. C. B., F. R. S., a notable electrical engineer, who has signed a report commending the insulating qualities of the new product above described.

FUTURE OF THE WIRELESS.

SIR HIRAM MAXIM, the great inventor, says that the unscientific public is expecting too much from the experiments Marconi is making to establish a wireless telegraph service across the Atlantic. Sir Hiram says that Marconi has done splendid work in establishing wireless communication between vessels at sea, if for no other reason than that if a ship is missing nowadays it can be traced quickly. But there is absolutely no reason for the owners of stocks in cable companies to become excited. Wireless telegraphy is more than a plaything, of course, but never will be a serious

competitor with ocean cables at least in our lifetime. Whoever pays to send a cablegram wants to keep it private to himself and to his correspondent, but privacy cannot be secured for messages sent by wireless. This would be particularly felt in time of war, so that, on the whole, Sir Hiram finds very great drawbacks to the wireless system as a practical institution of wide application.

SPARKS.

Benolite is the name given to a new insulating varnish, said to have high dielectric strength and great flexibility. It is said to contain no linseed oil and not to depend upon China wood oil for its characteristics. The black Benolite varnish, applied to insulating tape or cotton covered wire can be dried, it is said, in six to eight hours, at 212° F., giving a hard, glossy surface. It is marketed by the Benolite Co., Pittsburgh, Pennsylvania.

Steel rails and spools are now made for handling and slipping insulated and other wires and cables, instead of the more cumbersome and less durable wooden reels and spools hitherto in universal use for such purposes. The Frank Mossberg Co. (Attleboro, Massachusetts) have brought out a patented line of pressed steel wire reels.

MADISON GARDEN ELECTRICAL SHOW.

THE first annual Electrical Show, at Madison Square Garden, New York, from September 30 to October 9, was designed to embody "all the modern inventions and appliances in the world" that might have any bearing upon electricity. While not everything eligible for the show was to be seen there, there was a great variety of exhibits, and some of them very extensive, complete, and interesting to the engineer and the lay public as well. The show was organized by Electrical Show, Incorporated, a permanent organization under the presidency of Mr. George F. Parker, who is well known in the insulated wire trade. Their offices are at No. 116 Nassau street, New York.

The General Electric Co., with eight exhibition "spaces," showed a wide range of electrically operated apparatus and devices, from rock drills to ice cream freezers; in fact the tone of the show was reflected in a newspaper headline—"Electricity Solves Servant Problem," referring to the number of situations, not only in the world's larger work, but in the household as well, where electricity is now made to lighten or supplant hand work. The New York Edison Co., the National Electric Lamp Association, and the various Westinghouse companies were among the larger exhibitors.

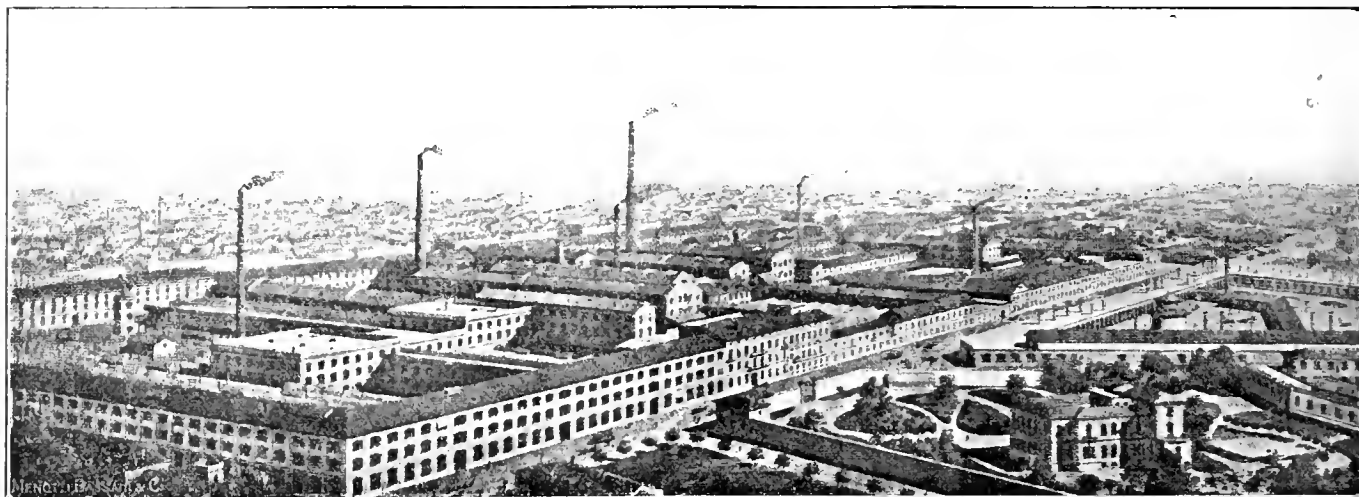
All these applications of electricity, of course, involve the use of insulating material, and particularly rubber. One visitor to the show remarked that the subject of insulation was kept to the front constantly, with a view to reassuring people to whom domestic electrical appliances are new that they are not necessarily dangerous. The India Rubber and Gutta Percha Insulating Co. (New York) had an extensive display of "Habirshaw" wires, cables, and cores, and other insulation products.

THE MILKING MACHINES.

A display which attracted much attention was that of the Burrell-Lawrence-Kennedy cow milker in operation, four cows from a Long Island dairy forming part of the exhibit. These milkers, described lately in THE INDIA RUBBER WORLD, are covered by no fewer than 17 American patents, controlled by the National Dairy Supply Co., No. 32 Park place, New York. The machines call for rubber for the milking tubes and attachments and also, if operated by electricity, for insulation.

CHICAGO ELECTRICAL SHOW.

THE third annual electrical show under the auspices of the Electrical Trades Exposition Co. will be held at the Coliseum, in Chicago, January 13-25, 1908. It will be under the management of Homer Hiesz, to whose efforts the success of the two previous exhibitions has been largely credited. His office is at 1006 Monadnock building, Chicago.



WORKS OF PIRELLI & CO., AT MILAN, ITALY.

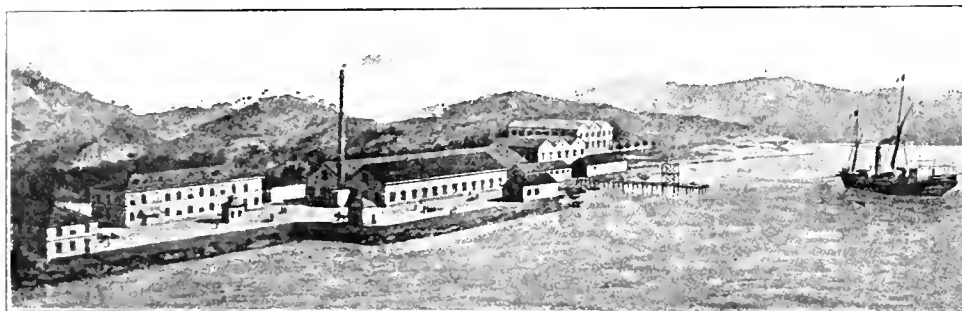
Italy's Great Rubber Factory.

THE foundation of the great rubber manufacturing firm of Pirelli & Co., at Milan, in 1872, was made possible by the wave of patriotism which led to and resulted from the formation of the present Italian nation about that time.

the first European house to compete with England in this important branch. Their success in this line was their greatest triumph, until they came to making sea cables.

In 1883 the partnership was incorporated under the name

Pirelli & Co., since when the style of the business has not been changed. At this time the making and laying of sea cables was monopolized by England. Pirelli & Co., encouraged by the Italian government, entered into a successful competition with England, with such results that they now rank among the great cable makers of the world. They were the first firm on the continent to make submarine cables. For this purpose they built the San Bartolomeo plant at Spezia, on the Riviera, in 1886, which remained the only sea cable factory



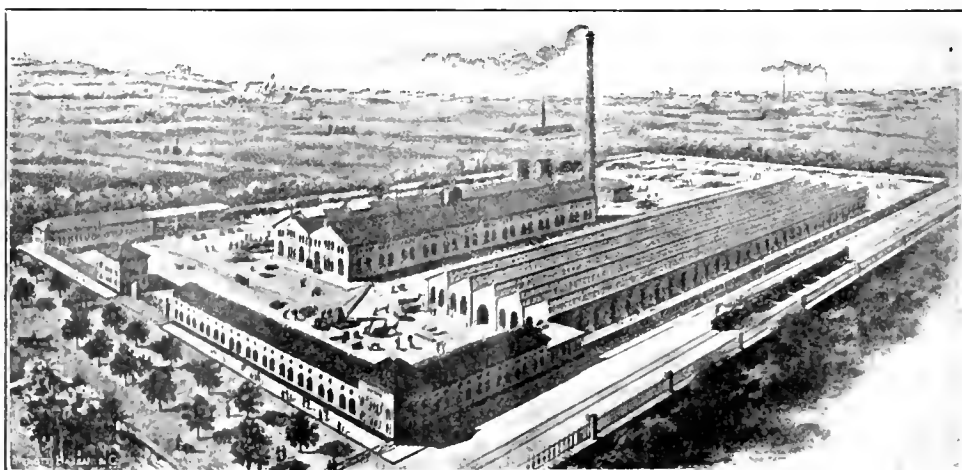
CABLE WORKS OF PIRELLI & CO., AT SPEZIA, ITALY.
[The Company's Cable Ship *Citta di Milano* is shown at the right.]

Italy was then still rather backward in business matters, though Milan has been the great industrial center of Italy for thirteen centuries. It was here that the house of G. B. Pirelli & Co. began making rubber goods on a very small scale in 1872, with a few imported workmen.

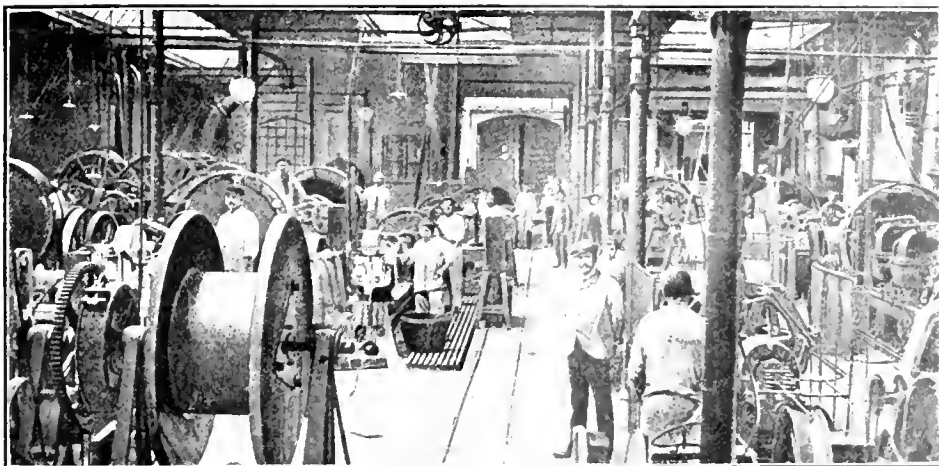
The infant industry won its first recognition in 1875, at the Florence fair. The next year the Lombardy Scientific and Literary Society gave it an endorsement that attracted the attention of the government, thus assuring the success of the enterprise. A partner was taken in, and G. B. Pirelli, E. Casazza & Co. greatly enlarged their plant, and added several new lines of rubber goods—surgical, sporting, and waterproof. In 1878 they began making hard rubber goods, learned insulation, and in 1880 took up gutta-percha work and made some successful underground electrical cables. In 1882 they began the manufacture of rubber thread, being

on the continent, until 1890.

The Italian colonial system was well developed by this time, and demanded independent cable connections. The government contracted with Pirelli & Co. to lay all of these cables. The



BRANCH FACTORY OF PIRELLI & CO., AT VILLANUEVA Y GELTRU, SPAIN.



VIEW IN PIRELLI & CO'S MILAN WORKS—MANUFACTURE OF ARMORED ELECTRIC CABLES

enterprising house ordered a cable ship, the *Citta di Milano*, built in England, which the government admitted into the royal navy. Before either their ship or the San Bartolomeo branch was built, Pirelli & Co. received their first order, at the beginning of 1887, to connect Massawa and Assab with the British cable system at Perim, in the straits of Babel Mandeb. They bought the cable for this in England, and engaged an English ship to lay it; but since that time they have been in all respects independent of other countries, and have laid thousands of miles of cables for the Italian and Spanish governments, and have taken over the maintenance of many other lines laid by England. Their Spanish branch, founded in 1901, at Villanueva y Geltru, near Barcelona, has grown rapidly, until it is now about one-third the size of the Milan plant. This branch has specialized in insulated wire and cables, and besides perfect equipment, has embodied all the best hygienic and safety appliances.

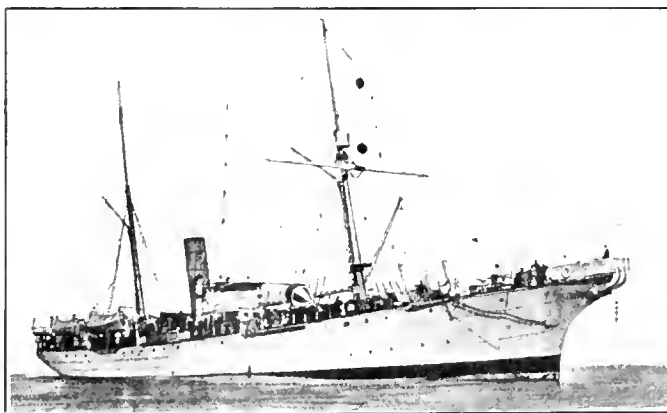
Pirelli & Co. have a monopoly of all the postoffice, telegraph, telephone and railway wiring in Italy, and have done most of the electrical insulation work for the various municipalities. About one-third of their total business is supplying foreign demands. One of their most brilliant achievements in this line was the conduit work done for the Ontario Power Co., at Niagara Falls, in the United States, to carry the power from the generating to the distributing station. A special type of 5-inch cable was required for this

current of 12,000 A. tension. However, they have since made cables, insulated with sheet rubber, which have stood a tension of 150,000 volts.

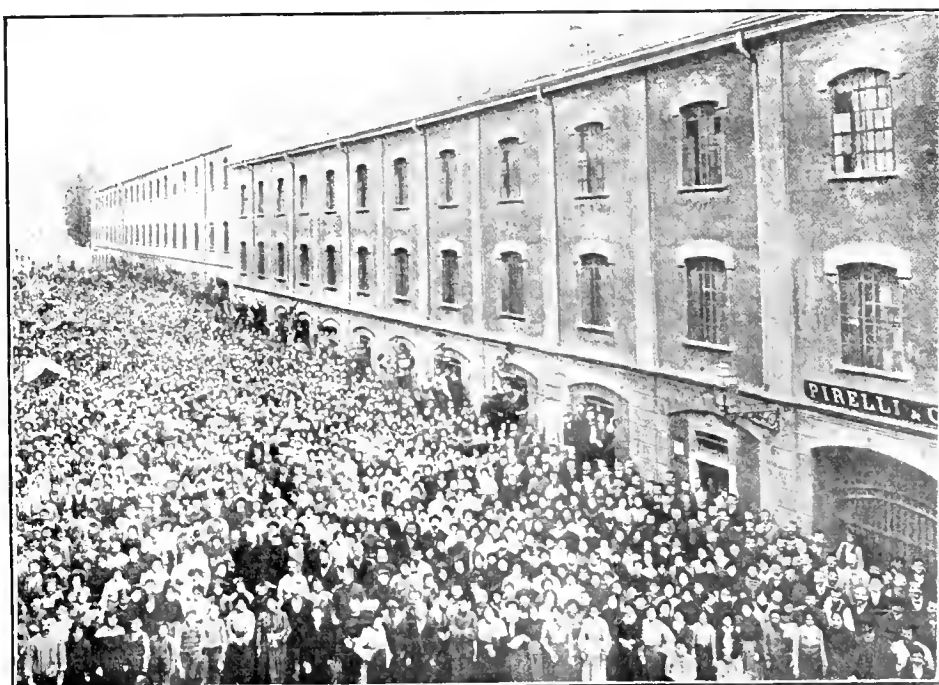
Another interesting bit of work was the laying of a power cable over a pass in the Andes mountains, where they climbed 8,000 feet.

Cable laying is ever spectacular, and the romantic Latins love to dwell on this feature of their business, but as a matter of fact this is not the most important branch of Pirelli & Co's business. There is probably no article of rubber, gutta-percha, asbestos, or balata which they do not make. They have never gone in extensively for footwear, because the happy southerners do not need rubber shoes, but they supply large quantities of rubber soles for athletic shoes, or for the foreign trade.

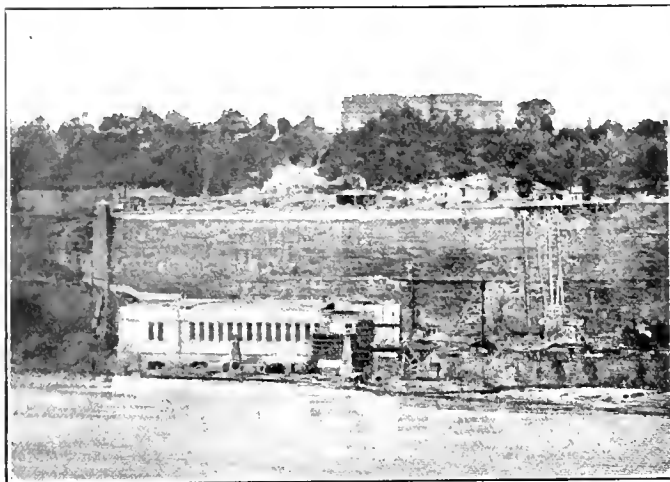
They have always been strong in rubber compounding, in making rubber and gutta-percha solutions, and in taking up new grades of crude rubber. They are always glad to analyze and value such samples of rubber sent in by colonial explorers. Seeking ever to develop Italian resources, they obtained a quantity of rubber grown in Sicily at the Palermo Experiment Station, and from this made an interesting line of hard and soft rubber goods, which they exhibited at the Milan Exhibition.



CABLE SHIP "CITTA DI MILANO."



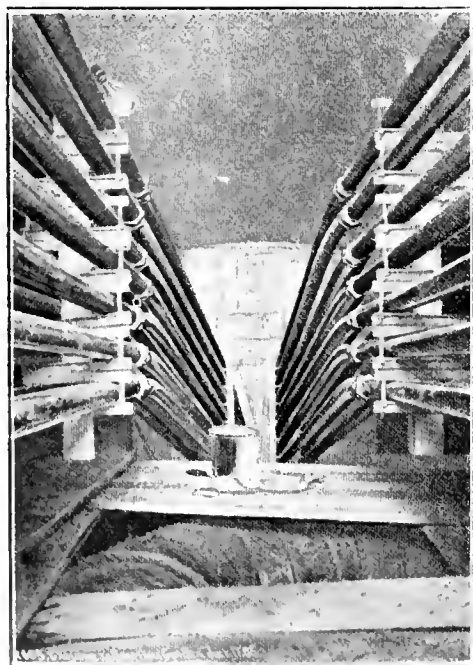
WORKING FORCE OF PIRELLI & CO., AT MILAN.



PLANT OF THE ONTARIO POWER CO., AT NIAGARA, WITH PIRELLI CABLES.

of 1906. Dr. Alberto Pirelli, the son, who is taking charge of his father's business, has braved the dangers of the Amazon valley to study rubber in the initial stages of production.

The breadth and depth of their education have been important factors in the success of the Pirelli family. European manufacturing is thoroughly feudal in character, so that these things mean more than in America. Thus the management of Pirelli & Co. have made it a constant study to promote the physical and spiritual wellbeing and the safety of the 4,000 or more workers in their employ. Aside from the element of philanthropy,



PIRELLI CABLES AT NIAGARA.

they find that such a course pays. Because of this close attention to every detail, Pirelli & Co. have a well ordered house and no labor troubles to interrupt the course of their prosperity.

On taking the form of a joint stock company, in 1883, Pirelli & Co. possessed a capital of 2,000,000 lire [= \$386,000], which has been increased gradually to the present date. In 1906 the figures stood at 7,000,000 lire in shares and 3,000,000 lire in debentures—a total of 10,000,000 lire [= \$1,930,000]. Quite recently the share capital alone has been increased to 10,500,000 lire. According to a statement made a year ago their annual business

amounted to 17,000,000 lire [= \$3,281,000], of which 5,000,000 lire [= \$965,000] was in foreign trade. Their total floor space then was about 702,000 square feet, and they employed about 4000 workers. Most of this, of course, was contained in the Milan works, which cover 583,000 square feet, and employed 3,200 laborers. There is reason to believe that Pirelli & Co. will continue to expand even more rapidly than they have done in the past, particularly since they have taken up so actively the manufacture of automobile tires.

PRODUCTION OF SULPHUR.

A CRISIS is reported to be imminent in the sulphur trade of Sicily. The mines for the most part have been owned for several years past by the Anglo-Sicilian Sulphur Co., Limited, under whose monopoly the sulphur trade for a time was very profitable. But in view of the growing competition of Louisiana sulphur, the wage scale in Sicily was reduced, until the available labor supply has largely been driven from the island, to seek more remunerative work. The problem with the mine owners to-day is how to secure sufficient labor to keep their business going. By the way, the American consumption of Sicilian sulphur has declined greatly. The importation direct from Italy of crude sulphur in the fiscal year 1901-1902 reached 163,000 tons; in 1905-06 it was only 66,000 tons.

There has been some interest of late in the possibility of mining sulphur in the New Hebrides, Pacific islands of volcanic formation, now held by the French. A British subject claiming a lease of all the sulphur mineral lands on Vanua Lava island has served legal warning upon the French Sulphur Mining Co. to stop trespassing by mining sulphur on that island, all of which is set forth in documents sent to THE INDIA RUBBER WORLD from the municipality of Pango Bay, with a request to "please notice."

THE SULPHUR POSITION IN ENGLAND.

An English correspondent writes to THE INDIA RUBBER WORLD: "After doing very well for its shareholders during the ten or eleven years of its existence, the Anglo-Sicilian Sulphur Co. is shortly to go into liquidation—that is, the sort of liquidation by which the shareholders do not lose any capital, but rather the reverse. It is common knowledge how the discovery of the Louisiana sulphur deposits has knocked the Sicilian industry, which will now be kept going by government aid. In past times the United States was Sicily's best customer for sulphur, but in 1906 the exports to the States were only 8500 tons, against 170,000 tons a few years ago. However, despite the competition which has arisen, consumers don't seem likely to reap any advantage, and in England at all events prices have remained stationary. It seems as well to say this, as the rubber works might think that their chemical merchants were not being quite fair over the matter. The British rubber manufacturers, as far as sulphur is concerned, may be divided into two classes, (1) those who buy sulphur in bags at the lowest price from general chemical merchants, and (2) those who buy it specially prepared free from crystals and acid from those who make its preparation a specialty. There are not wanting also those who are very anxious to obtain the latter qualities at the prices quoted for bay sulphur."

A BIT OF FACTORY PRACTICE.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In reply to inquiry No. 429 (on page 19 of your last issue), how to prevent rubber from sticking to iron molds during vulcanization, I beg to suggest that your correspondent try a solution of two tablespoonfuls of carbolic acid in a pint of lime water. This I have found efficacious when soap and talc have not given satisfaction.

J. W. CARY.

No. 160 Humphrey avenue, Bayonne, New Jersey, October 2, 1907.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

HARDLY any original work has been done in this subject in recent years, and modern authors usually quote the experiments of the late Dr. Mitchell, of Philadelphia, and of Graham, of London, when referring to the topic. In a recent paper, however, written in our London contemporary, the ver-

PASSAGE OF GASES.

satile Dr. Ditmar attacks the subject afresh. Probably the account of the experiments and the numerous figures given will not be closely studied by the man of business, and to the scientist it is not particularly reassuring to be told in the last paragraph that the results are in the highest degree remarkable and cannot be satisfactorily explained at present. The matter is not without importance in several branches of the rubber industry, of which hollow balls, gas tubing, and pneumatic tires may be mentioned. I cannot give the reference, but I am sure some one has proved that gas tubing containing a certain amount of mineral matter is more resistant to the passage of coal gas than is pure rubber. The subject acquires new interest for the motorist in connection with the use of Parsons's Sparklet inflators, a novelty introduced by the Parsons Non Skid Co., of London. The inflator consists of a solid drawn steel cylinder containing compressed carbonic acid in the liquid form, and by means of the special valve attachment with which it is fitted tires can be rapidly inflated with a minimum of effort up to 80 pounds pressure. With regard to any action of the gas upon the rubber I see no reason at all why anything injurious should be apprehended as long as pure gas is used. With regard to the question of diffusion of gases, according to Dr. Mitchell, gases which are easily liquefied by pressure penetrate rubber most readily. From this we might conclude that the carbonic acid would pass through the tire more readily than air with its large content of nitrogen. The figures given by Graham for their rubber films show that carbonic acid passed 13½ times as quickly as nitrogen. The conditions in the case of a tire are of course quite different, and against any theories which may be adduced there is practical evidence that tires inflated with carbonic acid have shown no slackening after more than six months use.

A MONTH or two ago it was mentioned in these notes that a local firm of repute would probably acquire this concern, situated at Bradford, Manchester, from the liquidator. A limited company with a capital of £40,000 has now been formed in which Charles Macintosh & Co., Limited, hold a controlling interest, Messrs. P. A. Birley and F. H. Smith being the first directors. As in the case of the new Eccles Rubber Co. in which the Macintosh firm are also largely interested, the Broadhurst company will be run as a separate concern, with its own officials and not merely as a branch of Messrs. Macintosh.

BROADHURST & CO., LIMITED.

FROM a general point this new flotation would appear to be sound, especially as the Peruvian consul general is on the board.

THE PERUVIAN RUBBER CO.

There is certainly plenty of rubber and of good quality in Peru, and the provision of greater facilities for its gathering is a much wanted step for its exploitation. With regard to the quality of the rubber the prospectus only mentions Mollendo fine. This is a *Hevea* product and the fact that it generally fetches about 2 pence per pound less than Bolivian fine may be attributed to its after condition. Nothing is said as to the existence on the property of caucho rubber. This grade has of late become popular in England, coming as it does in large quantities and of comparatively even quality. I refer to this specially because if this tree occurred largely in the new company's territory one might expect that an improvement in the procedure

of collection might be initiated; that is, the substitution of tapping for felling the trees. From a Peruvian official publication I glean that the *Hevea* or "Jebe" rubber trees grow to 20 to 25 meters high. The quality of the product is judged by the color of the latex, the best being violet, and the second quality red or white. The yield depends, among other circumstances, upon the quality of the soil and the altitude where found. It is contended that plantations could be successfully inaugurated if laid out on lines closely approximating to what is found in nature.

IN September a change took place in the directorate of this company, whose works are situated in Cornwall street, Openshaw, Manchester. Mr. George Spencer having joined the board as managing director. Mr. Spencer has held various important positions with Charles Macintosh & Co., Limited, for the last twenty years, more particularly in connection with tires. I understand that the Gorton company intend to double their capacity of output in order to manufacture many other classes of goods besides the tires which have been the principal product of the works so far. That the business previously done is by no means insignificant is seen in the statement that 9000 or 10,000 both of covers and tubes have been turned out per week during the past season.

GORTON RUBBER CO., LIMITED.

MOTOR TIRE ANALYSES.

MESSRS. CLAYTON BEADLE and Henry P. Stevens have contributed an article to the *Chemical News* dealing with their analyses of solid motor tires. The details of the mineral constituents are not given, and altogether there is little in the paper to which the manufacturer might object as giving away trade secrets. No novelty is claimed by the authors in regard to methods of analysis, and there is nothing in this direction which appears to call for comment. One or two points of a general nature, however, call for notice. The conclusion they draw from their work is that a thorough chemical and physical examination of a tire will lead to a reliable estimation of its value. This conclusion was also arrived at by Messrs. Schidrowitz and Kaye in a paper referred to recently in these notes, and indeed it is difficult to see how any professional chemist could arrive at any other, human nature being what it is. From a purely personal and business point of view I am quite at one with the above authors in their conclusions, but I recognize that it will not be an easy matter to effect the conversion of the tire buying public, to the extent at least of making them pay cheerfully for the analyses.

Messrs. Beadle and Stephens make sundry references in their paper to the time occupied by a complete analysis such as is necessary to determine the vulcanization coefficient, and there is very little disposition on the part of the motor tire purchaser to pay the fee, which cannot by any means be considered excessive having regard to the labor involved. Then with regard to the motor car builders, there is less disposition than there was to contract with one tire firm for the supply of tires over a certain period. In many cases the customers specify which tires they want fitted and the car builder does not concern himself as to their quality. Altogether, important as are the monetary interests involved, there does not seem to be a very fruitful field for the rubber analyst's labors in connection with it, unless perchance he cares to work at the bed rock prices prevailing nowadays in some other branches of analytical work. There is also another view of the matter which is expressed in no hesitating terms by those sceptical of the analyst's prowess. This is that analysis may give you the component parts of the rubber right enough, but that it is of little value in indicating the wearing capacity or probable longevity of the tire. This is a point which

is obviously open to controversy, but while it remains unsettled it must of necessity militate against the work coming in the rubber analyst's direction. In the course of a recent conversation with the writer, a well known tire manufacturer expressed the opinion that 50 per cent. of the wear and tear of a tire lies in the details of its construction rather than in the actual quality of the rubber, and that the best rubber as shown by analysis if badly manufactured or in conjunction with poor canvas would show up badly in practice compared with a much cheaper rubber mixing made up with the best textile material in the most approved manner. This would apply, of course, more to pneumatic than to solid tires, but it has a general application to our subject.

Physical tests are, it should be mentioned, specially referred to by Messrs. Beadle and Stevens as of value, and it is possible that their extended application along with chemical analysis will serve to dissipate the idea of the futility of chemical investigation. The above authors confess to a weak point in analysis and that it is the great difficulty if not impossibility of estimating the amount of reclaimed rubber in a tire mixing. It is acknowledged by them that the use of this material is reprehensible, though this dictum might possibly be challenged by some of the reclaimers. With regard to the particular rubber which has been used they also acknowledged the difficulties confronting the analyst. This latter problem is the more difficult of the two to my mind, but even with regard to reclaimed rubber I should hesitate before making any categorical statement such as would be necessary in a court of law. But to conclude these observations, in one respect at any rate chemical analysis can hardly fail in its purpose; this is in showing whether two tires sold as of similar composition really answer to this description. If they are not practically identical in composition, analysis will assuredly point out the discrepancies and it is hardly necessary to indicate how much information could be usefully applied in trade circles.

Nor much has been heard of the Radax tire for some time past, but from a conversation I had recently with Mr. L. Johnstone, who has the practical management of the Radax company's affairs, it appears that the construction of the motor tire is being actively carried on at the works of one of the cable companies, where the necessary plant is available. It is not surprising to hear that owing to the prevailing competition and cut prices nothing is being done with the Radax cycle tire.

TIRE NOTES.

As already mentioned, Mr. L. Swain has severed his connection with the Dook-Swain Tyre Co., of Ancoats, Manchester. He is now to be found at 277 Deansgate, Manchester. Besides the Parsons non-skid Mr. Swain represents the interests of the Collier tire. I understand that in the last eighteen months, since this tire has been made with beaded edge, it has gained considerably in popular favor, as it can now replace other types of tire at the motorist's will. Formerly, when it was bolted on to a special rim, such substitution could not of course be effected.

Despite the laudatory press notices which accompanied the evolution of the Hallé spring wheel it cannot be said to have proved a success, the complication of its construction being doubtless the main factor which has militated against it.

A new tire fabric, said to be of exceptional strength, has been produced recently by Mr. J. Whittaker, a cotton spinner of Stockport, and if report is to be believed, the mill is unable to respond to the demands made by tire manufacturers for the material.

A somewhat new departure is seen in the Thomas solid motor tire made by the Avon India Rubber Co. In this tire provision is made by means of a special rim for expansion all round, and not as in the ordinary tire for expansion at the sides only. By this means it is claimed that a much greater resiliency is obtained.

At a special meeting of the shareholders of the Scottish Vulcanite Co., Limited (Edinburgh), on September 12, it was resolved to go into liquidation.

RUBBER INTERESTS IN EUROPE.

GREAT BRITAIN.

AT the annual meeting of the Premier Cycle Co., Limited (London, September 11), the profit for the last business year was reported at £34,111 [\$162,011.82], against £32,420 for the year preceding. These figures cover the operations of the company's branch factory at Nurnberg, Germany.

The directors of British Insulated and Helsby Cables, Limited, announce an *interim* dividend for the half year ended June 30 last at the rate of 8 per cent. per year.

There has been organized among the rubber workers of Edinburgh a branch of the National Amalgamated Union of Labour.

The directors of J. Mandleberg & Co., Limited (Manchester), have declared an *interim* dividend of 10 per cent. for the half year ended June 19.

Mr. Isidor Frankenburg, head of the rubber manufacturing firm of I. Frankenburg & Sons, Limited, of Salford, Manchester, has consented to serve for the third year in succession as mayor of Salford.

GERMANY.

DR. HEINR. TRAUX & SOHNE, successors to the Harburg Rubber Comb Co., have been enlarging their two plants at Hamburg and Harburg, as they have been obliged to do so often in order to keep pace with the growth of their trade.

A strike was in progress lately at the Asbest- und Gummiwerke Alfred Calmon, A.-G., at Hamburg.

Köln-Ehrenfelder Gummiwerke, G. m. b. H., established in 1905 with 300,000 marks capital, has been converted into the Köln-Ehrenfelder Gummiwerke Aktiengesellschaft, with 1,000,000 marks [= \$238,000] capital for the manufacture of a variety of rubber goods. The chairman of the board is M. Streffler, of Cologne. The factory was occupied prior to 1905 as the German branch of the Colonial Rubber Société Anonyme, having been organized for the manufacture of rubber balls under the Cox patents. Upon the reorganization of the business in that year Herr Julius Balla, formerly with the "Prowodnik" rubber works at Riga, became the technical director, and the extensive manufacture of "patent gum" was taken on.

FRANCE.

SOCIÉTÉ Industrielle du Caoutchouc (63, rue Taitbout, Paris), organized with 1,350,000 francs [= \$260,055] capital, and now in its third year, has acquired from Auguste Harispe (who becomes technical director of the company) the sole rights to use his new processes in the rubber manufacture.

SWITZERLAND.

THE firm of R. & E. Huber, whose rubber works at Pfäffikon, in the canton of Zurich, were illustrated in THE INDIA RUBBER WORLD November 1, 1905 (page 55) have been succeeded by the Société Anonyme R. & E. Huber, Manufactures suisses de Cables et Fils électriques, d'Articles en Caoutchouc. During the past two years the buildings of the rubber department have been considerably enlarged and the scope of production widened. They are now manufacturing all kinds of hose, packings, mats, brake blocks, perambulator and carriage tires, rubber rolls, erasers, and hard rubber articles and also solid automobile tires.

RUSSIA.

THE Russian-French India Rubber Works "Prowodnik," at Riga, had net earnings of 1,750,148 rubles [= \$901,326.22] for the business year 1906 and paid 12 per cent. in dividends, against earnings of 1,013,495 rubles [= \$521,949.93] in the preceding year, with 8 per cent. dividend according to St. Petersburg *Herold*.

AMERICAN TIRES IN ENGLAND.

IN the directory of rubber tires in the British trade, appearing periodically in *The India-Rubber Journal*, the products are named of the following American makers: The Fisk Rubber Co., the G & J Tire Co., the B. F. Goodrich Co., the Goodyear Tire and Rubber Co., and the Pennsylvania Rubber Co.

The Rubber Planting Interest.

INCREASED ACREAGE IN CEYLON.

THE proprietors of the *Ceylon Observer*, having finished the compilation of their "Handbook and Directory" for 1907-08, give out a preliminary statement of the area planted to rubber in this colony. Based upon reports made to them by estates managers and, for the most part, verified, the statement embraces 103,000 acres planted to rubber alone, 41,700 acres to rubber planted in tea, and 10,707 to rubber in cacao. There are also certain returns of "rubber trees," instead of acreage. Applying the customary rules of estimating, the whole is equal to 146,632 acres planted to rubber alone, in proprietary estates, besides which the Messrs. Ferguson feel justified in adding 3400 acres in small native lots, making a round total for Ceylon in August, 1907, of 150,000 acres under rubber. Last year's return of rubber on estates was 103,706 acres.

PLANTING IN DUTCH NORTH BORNEO.

THE Sambas Rubber and Gutta-Percha Co., Limited, registered in London August 24, 1907, with £100,000 [= \$778,640] capital, was formed to acquire 131,325 acres in the sultanate of Sambas, Dutch North Borneo, and to develop and extend plantations of india-rubber and gutta-percha. Besides the extensive native growths of rubber and gutta, there have been planted 14,501 *Hevea* rubber trees, 14,499 *Ficus elastica*, and 35,000 gutta-percha, in the years 1903 to 1905. The purchase price of the concessions, from the Cultuur en Handel Maatschappij Siloewas, of Amsterdam, is £75,000, of which the vendors accept £60,000 in shares of the new company. A favorable report on the properties has been made by Ashmore Russan, a rubber expert of London. There were offered for public subscription on September 2 shares amounting to £55,000. Registered offices: 3 and 4, Fenchurch street, E. C., London.

A NEW ENTERPRISE IN GUATEMALA.

THE West Coast Rubber Co., incorporated March 8, 1907, under the laws of New York state with \$250,000 capital, has acquired the finca Puñian de Arrivillaga, consisting of 22,000 acres of forest and pasture lands, in the department of Escuintla, in Guatemala, not far from San José, the chief Guatemalan port on the Pacific. The forest lands include a large number of native rubber trees (*Castilloa elastica*), in addition to which the former owners, for some ten years, annually scattered rubber seed broadcast, from which many thousands of young trees have been produced. The West Coast company have begun the collection of rubber and its regular shipment to New York, and in June planted some 350 acres, putting in rubber seeds "at stake." The officers, all of New York, are Frank E. Morse, president; P. S. Jennings, vice president; and H. S. Stalknecht (No. 16 Exchange place), secretary and treasurer. The Republic Development Co., who have nearly completed planting 4200 acres in Mexico for the Obispo Rubber Plantation Co., have subscribed for one-half the capital stock of the West Coast company and begun the development of Plantation Puñian. Mr. Jennings, named above, is president of the Republic Development Co., and Maxville Riddle, manager of the Obispo plantation, is a director in the West Coast company.

HAWAIIANS PLANTING IN THE MALAY STATES.

MENTION was made in this paper recently [February 1, 1907—page 147] of a company formed in Hawaii to establish a plantation of *Hevea* in the Malay peninsula. The promoters, The Waterhouse Co. (Honolulu), have recently floated a second company, Tanjong Olok Rubber Plantation, Limited, incorporated under the laws of British Columbia, with \$140,000 capital authorized, to plant in Johore, on land leased from the govern-

ment of that state, which adjoins the Federated Malay States. Tanjong plantation will be on the Muar river, below the noted Lanadron estate of the Messrs. Pears. Dr. E. T. Waterhouse, of Honolulu, is president of the new company; Paul R. Isenberg, vice president; and Fred L. Waterhouse, secretary and treasurer. The estate manager is Frank G. Wallace, some time with the Sandycroft estate. At last accounts 300 acres had been planted to rubber.

PLANTING IN EAST SUMATRA.

THE latest edition of Hallerman's "Adresboek," published in Sumatra, records 44 companies engaged in rubber culture on the east coast of that island, distributed throughout the various districts thus: Serdang, 17; Langkut, 7; Padang Bedagei, 6; Batoe Bahra, 6; Laboean Batoe, 4; Asahan, 2; Siak, 2. Of these, 14 are planting rubber alone; the remainder are planting other crops with rubber as follows: Coffee, 19; tobacco, 4; coffee and cocoanuts, 2; tapioca, 2; groundnuts, 1; coffee and tobacco, 1; cocoanuts, 1.

PLANTING IN JAVA.

THE Belgisch-Nederlandsche Cultuur- Maatschappij, operating in Java, reported as having planted, at the end of 1906 (since which time considerable more rubber has been put in), about 527 bouws [= 1302 acres] in *Hevea Brasiliensis*, there being 531,422 trees recorded. On the company's estates at Tijrandji, Passir Empoe, and Tjoeroeg the company are planting cocoanuts and, as "catch crops," cacao and ground nuts. The company is capitalized at 700,000 florins [= \$281,400].

GOOD PROGRESS IN HAWAII.

THE Hawaiian rubber growers have formed an association for the purpose of assisting each other by coöperation. THE INDIA RUBBER WORLD is informed that the Nahiku Rubber Co., Limited, at Maui, T. H., expect to begin tapping within a year, and by the fall of 1909 will have 100,000 trees ready for tapping, if the rate of growth thus far should continue. The trees under cultivation are *Manihot Glaziovii*, of which species our correspondent writes: "I do not think that there is any place in the world where the 'Ceará' tree has made such a wonderful showing as it is doing here."

INTERESTS IN RUBBER IN PAPUA.

THE commercial agent for Canada at Melbourne writes that the director of agriculture of Papua, or British Guinea, now under control of the Australian commonwealth, has recently planted for experimental purposes many thousands of Pará rubber stumps, from which successful results are predicted. Large areas of land are being taken up by Australian investors interested in rubber. A company registered in London August 26, is the Papua Rubber and Gum Syndicate, Limited, with £2,500 capital.

EVEN SIAM PLANTS RUBBER.

A PRIVATE syndicate in Bangkok, after running a rubber estate for 18 months, has formed itself into a company registered at Singapore as the Kombok Rubber Co.

PLANTING IN THE FRENCH CONGO.

THE French colonial government has issued a notice to *concessionaires* in the French Congo engaged in exploiting rubber, calling their attention to the neglect of existing regulations requiring a certain amount of rubber planting, in proportion to the exports of crude rubber, the regulations being similar in character to those enforced in the Congo Free State. Not only are the *concessionaire* companies required to plant rubber as stated, but it is announced that the natives may discharge a por-

tion of the small head tax imposed annually by setting out a certain number of rubber plants. Both the "ireh" trees (*Funtumia elastica*) and *lianes* (creepers) may be planted.

YIELD OF PLANTED RUBBER

The yield of plantation rubber is treated in some detail in the *Tropical Agriculturist* by Ivor Etherington, in a study of the last published annual reports of 41 companies producing rubber in Ceylon and the Federated Malay States. The statistics relate to 1906, and comprise a total yield of 1,164,033 pounds of rubber, ranging from only 851 pounds for one estate to 153,358 pounds, harvested by the Vallambrosa company. [See THE INDIA RUBBER WORLD, October 1, 1907—page 8.] It is difficult to arrive at the average yield per tree, for the reason that the trees vary in age, and all have not been tapped the same number of times. It may be of interest, however, to note that on 18 estates 402,801 trees yielded 670,433 pounds of rubber, or 1 $\frac{2}{3}$ pounds per tree.

On the two estates of the Highlands and Lowlands company the following results were obtained, the trees on the second estate being younger than on the other:

	Trees.	Pounds.	Average.
Highlands and Lowlands.....	38,630	95,333	2.40
Batu Unjor	39,874	38,952	97

On the first estate a yield of over 7 pounds per tree was obtained from 807 trees planted in 1899 and widely planted over 16 acres. The result of three tappings of these trees was:

	Pounds.
First tapping	2,500
Second tapping	1,469
Third tapping	1,773
Total	5,742

Some large yields of *Hevea* rubber are recorded in the report of the director of the Ceylon royal botanic gardens for 1906. They result from tapping trees during eleven months (November, 1905-September, 1906), in a series of experiments with different methods and under varying conditions. For instance, three groups of 5 trees each (size and age not stated) were tapped by the long spiral system, each group for a different number of times, with the average yield per tree of dry rubber stated below:

	Tapped.	Yield.—
First group	270	11 lbs. 6 ozs.
Second group	136	12 " 8 "
Third group	44	3 " 13 "
Fourth group	11	0 " 10 "

One tree, tapped 93 times by the full herring bone method, gave 14 pounds 8 ounces of rubber; two trees tapped 84 times by the same method averaged 15 pounds; and one tree tapped 78 times by the full herring bone method gave 10 pounds 14 ounces. These trees were tapped at different seasons, and with varying tapping areas, most of the details of which do not appear in the report, nor is the condition of the trees after tapping referred to. The figures are given space here merely as showing the rubber yielding capacity of *Hevea* under cultivation.

AS TO OVERPRODUCTION.

Writing on this subject, in the preface to the "Tropical Investors' Guide" [see THE INDIA RUBBER WORLD October 1—page 19], F. Crosbie Roles says: "In 1908 Ceylon and Malaya may reach the giddy altitude of producing an eightieth part of the world's supply—say 300 tons from Ceylon and 600 tons from Malaya—but the after advance will not be rapid until the large areas planted in 1905, 1906, and 1907 come into bearing in 1911 and onwards. There may be at the present time 120,000 acres under rubber in Ceylon—30,000 acres of it widely planted through tea—and the rate of development reached its high water mark in 1906. In other words the extensions this year will be smaller than last year's; and it is difficult to imagine that Ceylon will ever possess more than 220,000 acres of rubber in full bearing. Even this area will be reached gradually, and only under the encouragement of sustained good prices, with ample and cheap

labor prospects. - - - The annual yield from 220,000 acres of rubber at 140 trees to the acre and 1 $\frac{1}{2}$ pounds of rubber per tree—which is a full estimate of both trees and yield over a large area—is 20,000 tons, realizable possibly in 1820. In the Malay peninsula in the same year 40,000 tons may be produced, with 15,000 tons from the Dutch colonies and Borneo." By this time, Mr. Boles thinks, the uses of rubber will have increased to such extent that the increased output which he forecasts will not amount to overproduction.

STATISTICS OF PRODUCTION.

	1907. Pounds.	1906. Pounds.
<i>Anglo-Malay Rubber:</i>		
September	22,260	11,300
January-August, inclusive	126,701	53,818
<i>Vallambrosa Rubber:</i>		
September	17,129	13,769
April-September, inclusive	103,908	55,376
<i>Kepitigalla Rubber Estates:</i>		
April-June, inclusive	10,141	5,736
<i>Perak Rubber Plantations:</i>		
April-July, inclusive	7,203	4,362
<i>P. P. K. (Ceylon) Rubber Estates:</i>		
January-July, inclusive	7,109	3,273
<i>Highlands and Lowlands:</i>		
August	25,614	12,625

RUBBER AT AN AGRICULTURAL FAIR.

RUBBER occupied a position of importance at the fourth annual joint agri-horticultural show in Malaya, held this year at Kuala Kangsar, in the state of Perak, beginning on August 9. Exhibitors of Pará rubber received awards as follows: Highlands and Lowlands estate, for dry block and wet block; Vallambrosa estate, dry block; Lanadron estate, dry block; Bukit Rajah Hope estate, crepe rubber. The governor's cup was awarded to A. D. Machado. Highlands and Lowlands estate and Golden Hope estate won prizes for rambong (*Ficus elastica*) rubber. The show was attended by the British high commissioner (Sir John Anderson, K. C. M. G.), the sultans of Perak, Selangor, and Johore, and many other notables, all of whom seemed interested in the part that rubber is taking in the development of the Malay peninsula. Fifty elephants competed for prizes at the show and the crowds were entertained with moving pictures.

NEW SUBSTITUTES FOR LEATHER.

THE British Leather Cloth Manufacturing Co., Limited, of Hyde, near Manchester, are marketing in a variety of qualities, colors, and leather grains, a material for upholstering furniture, carriage and motor tops, and also for bookbinding and the like, which they call "Rexine." It is referred to as waterproof, scratchproof, and hygienic, and has been supplied to many branches of the government service in Great Britain, and also to the governments of the colonies and various other countries, and to railways in South America and the Far East. The material belongs to the class of which "pantasote," an American product, is a prominent type.

"RUBBERNIT" FOR CARRIAGE TOPS.

C. L. STEWART, of Rutland, Vermont, whose waterproofing compound for horse and wagon covers and the like has been referred to in THE INDIA RUBBER WORLD, has developed specimens of cloth treated by it fitted for hospital sheeting, and heavier types for carriage and automobile tops. This "Rubbernit" fabric is tough, pliable, and apparently durable and is referred to as improving with age. Mr. Stewart is prepared to sell his formulas to a waterproofing concern or to organize a new company.

Mr. Stewart says: "The spread cloth can be proofed; there is no vulcanizing; can be made in any color; no noticeable odor; tough and durable; not sticky in hot weather nor stiff in cold; will not crack or peel; wears better than oiled or rubber goods."

A Leading Rubber Planter.

THE portrait on this page is that of Mr. H. K. Rutherford, of London, chairman of the Rubber Growers' Association recently formed in that city. The objects of this association, by the way, are to promote the mutual consideration and discussion of all questions affecting the members as persons interested in or connected with the growing of rubber, particularly in the Far East, and to watch over and protect such interests, and to do all such other lawful things as are incidental or conducive to the attainment of these objects. The occasion seems appropriate for placing before the readers of THE INDIA RUBBER WORLD a brief summary of the work of one of the leading men now engaged in the cultivation of rubber.

Mr. Rutherford went out to India in 1869 and was engaged there and in Ceylon for many years as a civil engineer, in the construction of railways. Like many Scotchmen, however, he was not afraid of turning from the procession in which he had been trained and devoted his talents into a field where he saw greater opportunities for success. His first venture in tropical agriculture was in the growing of cinchona which in the "eighties" promised a rich reward to those who ventured into it. These hopes, however, were not realized, and although a few planters did well at the start, the whole industry, in a few short years, died out, and at this time no cinchona or quinine bark is grown in Ceylon.

The subject of our sketch then ventured into what, in those days, was the somewhat speculative course of opening up land in the low country of Ceylon for tea, in connection with a few other engineers who were partners with him in the railway contracts. Success crowned the venture and the lands they then opened up, and afterwards acquired or amalgamated, now form what is known as the premier tea company of Ceylon, viz., the Ceylon Tea Plantations Co., Limited, with a £248,460 [= \$1,200,130.60] capital paid in. Mr. Rutherford has been chairman and managing director of this company practically from its inception. It has paid regular dividends of 15 per cent. for the last twenty years. Added to its magnificent tea estates it has now some 2000 acres planted with rubber and its £10 shares stand in the market at £36. The company's production of tea in 1906 was 4,671,371 pounds, besides other crops.

Mr. Rutherford was early in the field in planting rubber in the Federated Malay States, and has considerable interests there and in Java and Ceylon in various rubber concerns. He is chairman of the Bukit Rajah Rubber Co., Limited; The Federated (Selangor) Rubber Co., Limited; The Seafeld Rubber Co., Limited, and The Batu Caves Rubber Co., Limited. He is also a director of The Pelmadulla Rubber Co., Limited; The Java Rubber and Produce Co., Limited; The North Hummock (Selangor) Rubber Co., Limited, besides being interested in several other companies dealing in tropical produce, including an important coffee growing company in the state of Sao Paulo, Brazil, on whose estate some 400 acres have been planted to rubber this year. Several of the rubber companies named above are harvesting rubber, the Bukit Rajah estates alone having yielded 118,982 pounds last year. It may be added that some of the rubber planted among the tea by the Ceylon Tea Plantations Co. is also now in tapping.

Mr. Rutherford is 61 years of age and early in the present

year made a trip to Ceylon and the Federated Malay States. On that occasion he visited every property with which he was connected, and was thereby able to inform the shareholders in the various companies exactly how matters stood on each, and also to instil a degree of confidence among them which probably few other directors could have done. Mr. Rutherford's views on the capabilities of the East with regard to the future of rubber have been expressed in his many utterances and writings, and have from time to time been given to our readers of this journal. He is a firm believer that Eastern planters will in time be able to successfully compete against all comers in the various markets of the world, owing to the fact that labor is so much cheaper there than in other rubber producing countries. Java he expects to be the cheapest producer, Ceylon next, followed by the Federated Malay States. Having been so long, however, connected with tropical agriculture and seen its many vicissitudes, he does not shut his eyes to the fact that the unexpected may happen in rubber also. The risk of disease to the trees of the *Hevea* variety,

owing to the species not being indigenous to the Eastern hemisphere, the risk of labor troubles when the vast areas planted and being planted come to the producing stage, and the possibility of a substitute for rubber being discovered must all be weighed up and taken into the consideration of any one embarking in the industry.

The office of the secretary of the Rubber Growers' Association, it may be mentioned here, is at 1, Oxford court, Cannon street, E. C., London.

PLANTING MISCELLANEA.

DR. J. C. ORCUTT, writing from the *finca* "La Luisa" to the *Mexican Investor*, notes the result of measuring 30 four year old *Castilloa* trees, at two different dates. On May 27 last their average circumference was a fraction over 21 inches; on August 8 they averaged just 3 inches more, or 24 inches. Dr. Orcutt says the trees were four years old (from seed) about July 1, and he estimates their average girth on that date at 22½ inches.

The schools of instruction in rubber established by the government of French West Africa for the benefit of the natives, have been referred to in this journal. A recent decree provides for their extension to the colony of French Guinea. There are two periods of instruction yearly: (1) In rubber planting and culture, during June and July; (2) in the tapping of rubber trees, coagulation, and preparation for market, during October, November, and December. At the end of the second period the rubber collected is sold and the proceeds divided among the pupils.

Recently an illustrated lecture on rubber culture in Mexico was given before a large audience in London by Mr. Alfred Berry, of the Chilean Exploration and Development Syndicate, Limited, which controls, it is stated, some important rubber enterprises in the Mexican state of Oaxaca.

Vacuum driers are being offered to the rubber planters of the Far East having a capacity up to 330 pounds of wet rubber at a charge.

A Ceylon newspaper, reporting the settlement of the estate of a local planter lately deceased, prints an inventory of his property, including 538 shares, in no less than five large rubber planting companies.



H. K. RUTHERFORD.

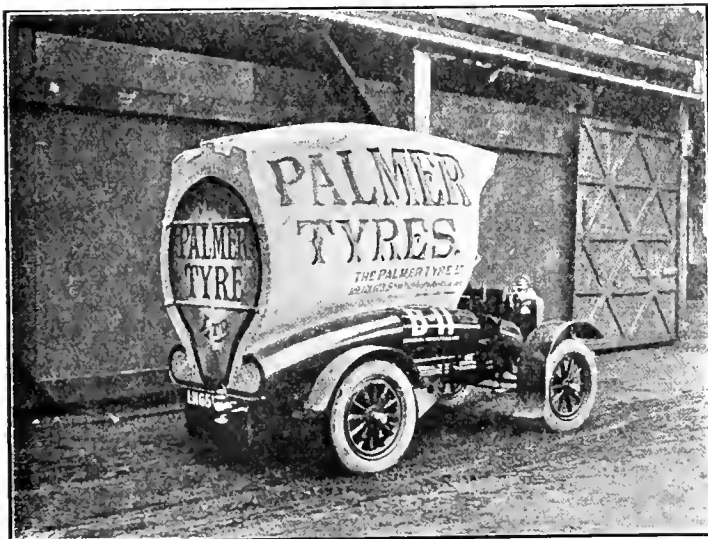
[Chairman of the Rubber Growers' Association (London), and of important rubber and tea planting companies.]

COMMERCIAL VEHICLE TRIALS.

THE commercial vehicle trials in England, which came to an end during the past month, under the auspices of the Royal Automobile Club, have concentrated the attention of the public and the trade alike to a very large degree upon this type of self-propelling vehicles and the net result can hardly fail to be an increased demand for motor cars for commercial purposes. Of the judges, 8 represented the Automobile Club, 5 the Commercial Motor Users' Association, and one the Society of Motor Manufacturers and Traders, so that the trials were a matter of concern to many interests. As officially stated—

"The object of the trials is to demonstrate in a convincing manner the advantages of mechanical haulage over horse haulage for the transport of freight, and to show the great progress which has been made in the construction of commercial motor vehicles, particularly in matters of efficiency, economy, and reliability."

Twenty-nine competitors entered 60 cars, of various types and capacity, of which 56 actually started. Forty of the cars were of British manufacture, that country having been always to the fore.



AT THE COMMERCIAL VEHICLE TRIALS.

[The Thames van entered by The Palmer Tyre, Limited. The body represents a section of the well known Palmer Cord tyre, and the whole forms a specially smart little van. The chassis is a standard 15 cwt. 10-12 H. P. Thames, with the back axle and springs specially strengthened to carry 20 cwt. The van was equipped with Palmer Cord tires—35x5 inches front and 32x5 inches rear.]

in the construction of commercial vehicles. The touring began from London on September 9 and ended there on October 12, being divided into 22 road trips, touching at all the principal towns in England, and covering 34 secular days. At eight of the towns at which stops were made formal "exhibitions" of commercial motor vehicles were held. The awards were to consist of Royal Automobile Club medals and special prizes, based upon markings under 18 heads, all relating to practicability and economy of operation.

It would appear that the matter of tires was not taken into account in marking points for the awards, though tires have been very much discussed in connection with the trials. Nearly all the entries were equipped with rubber tires; a few heavy steam lorries had steel tires, and one or two had wooden block treads. A few vans had pneumatic tires, front and rear, and some others pneumatics in front and solids in the rear. For the most part, however, solids were used, for the most part with "twin" tires on the rear wheels. No less than 41 of the whole number entered were thus equipped. The average sizes were 34 X 4 inch single or twin tires for two ton vehicles; for the three ton vans 34 X 4½ inches on the front and 40 X 4 inches on the rear wheels.

Every report that has come to hand relates in some way to the tire feature, and fairly representative of the prevailing sentiment, perhaps, is the following paragraph from *The Commercial Motor*, a London journal which has given special interest to the late trials:

"THE TRIUMPH OF RUBBER.

"We have already referred at some length to the revolution in transport which the self-contained, rubber-tired, petrol vehicle for 5-ton loads may cause in existing conceptions of the possibilities in long-distance haulage, and we would now direct the special attention of all who are following our reports to the remarkable advantages which are conferred by the use of solid-rubber tires. We detect the fact that many tendencies and considerations are in the direction of the rubber-tired, high-speed lorry. Absence of noise, reduced general maintenance, lighter vehicles, and greater performance are all coming within the scope of practical politics by reason of recent improvements in the manufacture of such tires, and as a sequel to reductions in their cost. Hight as both their first cost and their maintenance may appear to the casual enquirer, he who enquires further will incline to the view that, except in the case of the very heaviest axle-loads, where speeds are restricted to five miles an hour, the extra outlay upon rubber tires is more than recouped in the results which they alone render possible."

The tire equipment of the 60 cars entered is stated by one of the motor car journals to have been as follows:

Shrewsbury & Challiner....	9	Turner	1
Sirdar	6	Gaulois (French).....	5
De Nevers	6	Continental (German)....	3
Dunlop	2	Polack (German).....	11
Palmer Cord	1	Peters Union (German)....	3

Besides, two cars were equipped with Dunlop tires on the front and De Nevers on the rear wheels.

THE RETURN OF THE BICYCLE.

IN an article on bicycle tires the well edited *Sporting Goods Dealer* (St. Louis) says: "With the discussion of tires our attention is called to the bicycle as a side line for the dealer in sporting goods. It is probable that there is not a line that the dealer could handle on the side which is more easily sold or more profitable to handle than an up-to-date and attractive stock of such. The demand for good, easy running, responsive bicycles has increased enormously within the past two years. There are more bicycles being used, and every day is seeing more of them purchased, so that the sporting goods dealer who fails to grasp this opportunity of adding to his trade and profits is surely wilfully blind. Let him look around for himself; let him note the number of bicycle clubs that are being formed; let him note the interest of the buying public—the real, live, human interest, and he will agree that more bicycle enthusiasm is now being displayed than for a term of years. And this condition does not exist only in one locality, but the situation is the same the world over. No, we do not see anything but good times ahead for the bicycle, and the dealer who will take up the line in dead earnest. Cycling has come into its own again, and is strongly and distinctively all right."

COLLECTING A BILL FOR TIRES.—A citizen of Denver, though reputed wealthy, allowed a bill for a set of automobile tires to become so long overdue that the dealer became more than impatient, says *Motor World*. One morning this same citizen, leaving his car at the curb while visiting a friend's office, was surprised on coming out to find the tires missing from it. He called the police, who traced the tires to the firm who had sold them, and who told the police that they had simply taken back a set of tires for which they had been unable to collect payment, and cancelled the invoice.

New Rubber Goods in the Market.

VOLLEY BALL.

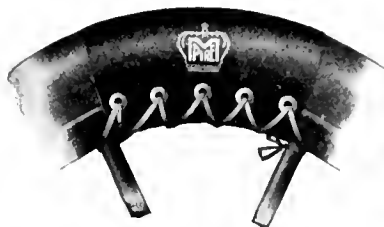
THIS is one of the newer games and is one which lends itself equally to indoor and outdoor sport. It partakes somewhat of both tennis and handball, and hence is sure to be popular with devotees of both sports. One of the charms of the game is that it may be engaged in by any number of persons. As it is new and preëminently fitted for the gymnasium or exercise hall, it is obvious that it will be much practised during the coming winter. Its simplicity does not exclude any, as the game consists of keeping the ball in motion over a high net, from one side to the other. The ball is made in the regulation size of white leather with pure rubber bladder, in two grades of leather. The list price is from \$2.50 to \$4 each. [A. J. Reach Co., Philadelphia.]



REACH VOLLEY
BALL.

"EMPIRE" TIRE REPAIRER AND PAD.

MANY a tire blowout has been prevented by placing a protector over a tire that is on the point of developing a break in the fabric, and to this end the "Empire" protector has been placed on the market. It is strongly made, having a heavy rubber tread and is warranted to withstand a great amount of service.



EMPIRE TIRE REPAIRER

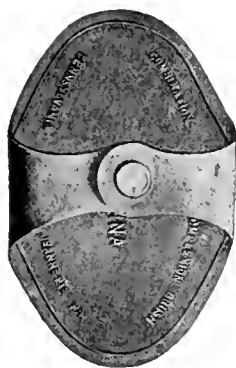


TIRE PAD.

It is made for 2½, 3, 3½, 4, 4½, and 5 inch tires. The pad is intended to be placed inside the outer case when the fabric is broken. It should always be used in connection with a tire protector, as it will prevent damage to the tube through coming in contact with the broken fabric. [Empire Automobile Tire Co., Trenton, New Jersey.]

COMPLEXION BRUSH.

ONE of the great secrets of perfect health is now conceded by the profession to be found in a knowledge of sanitary laws and adherence to them. In no particular is this knowledge and its corresponding enforcement so necessary as in the care of the body, as in the bath, for example. It is important to keep the pores of the skin free from dust, and this, it is claimed, cannot be satisfactorily done with the ordinary cloth or sponge, but a certain amount of friction is needed in order to assure cleanliness. The friction also serves another purpose, that of stimulating circulation. With this end in view many bath appliances have been put on the market, but in no field is there greater activity in the output than in the rubber industry. In so large a percentage of cases the rubber complexion and massage brush seems "to fill the bill." One of these



COMPLEXION BRUSH.

brushes that is much used is the one manufactured by the Pennsylvania Rubber Co., Jeannette, Pennsylvania.

A RAZOR IN A RUBBER CASE.

For the man who shaves himself, the Arnold Fountain Safety Razor lays claim to many superior advantages; and to the man who does not shave himself, this razor may offer reasons why he should. It is in effect a combined regular and safety, with the advantages of both and some that are peculiar to itself. In its case it has the shape and size and exact appearance of a handsome gold mounted fountain pen, and as such can be easily



ARNOLD FOUNTAIN SAFETY RAZOR.

carried in the vest pocket, and thereby the possibility of traveling without it or of the annoyance of being cumbered with various attachments is overcome. And there are no delicate parts to get out of order and no detached parts to lose. The case is made of the best vulcanized rubber, handsomely chased. [Arnold Safety Razor Co., Reading, Pennsylvania.]

"ECLAIR" PUMP CONNECTION.

THE average tire pump connections have been found to leak more or less, and also that the leak increases with the pressure. With the new "Eclair" connection the exact opposite obtains, for as the pressure increases the air in the compression chamber expands the rubber washer, which is an integral part of the connection, and so augments its adhesion to the tire valve. In short, the law upon which its construction is based is that the harder one pumps the more perfect the connection. The attachment to the tire valve is made by simply pressing it on, and its



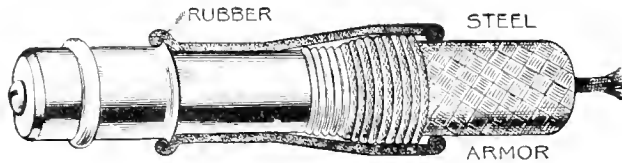
"ECLAIR" PUMP CON-
NECTION.

"ECLAIR" PUMP CONNECTION DIS-
ASSEMBLED.

removal is just as simple. It merely has to be pulled off. No screwing or unscrewing has to be done. The apparatus consists of a compression chamber hermetically sealed by a rubber washer of special construction. This washer is held in place by a metal disc which is screwed into a removable ring placed over the compression chamber, and is drawn up tightly against a flange by means of a metal disc. It might be supposed that this rubber washer would readily wear out and lose its usefulness, but on the contrary its life seems to be most enduring. It is said to have been tested exhaustively with the result that from 4000 to 5000 inflations are necessary before the substituting of a new washer. This substitution can be made, however, in a moment's time. It can be attached to any pump and fits any tire valve. [Leon Rubay, No. 1697 Broadway, New York.]

STEEL ARMORED IGNITION CABLE.

THIS is something that is new in the way of cables and is covered by recent patents. It consists of a special rubber cable protected by a flexible steel armor. Several layers of rubber alternate with layers of a new compound, and the whole is covered by a paraffined waterproof braid. The last braid is embraced by a strong steel armor which, although protecting the cable against injury, does not by any means interfere with its flexibility. The steel armor is brought into conducting connection with the ground by means of a wire coiled around it. The advantage of this invention manifests itself in an increase of the spark in the plug, in some cases more than doubling its efficiency, it is said. The application of the smaller size to the primary circuit brings the spark in the circuit breaker, resulting from a poor coil to complete disappearance, thus lengthening the

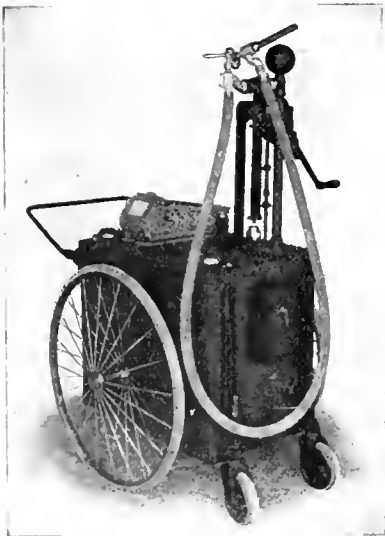


STEEL ARMORED IGNITION CABLE.

life of the circuit breaker. The cable is sold cut to the desired length for each motor and fitted out with special terminals ready to be hooked to the engine without any additional work whatsoever. It is now being used in some of the large American and European automobile factories. [Herz & Co., Nos. 203-205 Lafayette street, New York.]

PORTABLE WHEEL TANK FOR GASOLENE.

By the use of this tank the old method of drawing gasolene from a tank into an open can and then transferring this to the desired car is done away with entirely, likewise its attending dangers. To meet the demand for a safe and convenient method of filling a number of cars with gasolene, this tank has been perfected, and so far facilitates the labor of the garage that each car may be filled without the necessity of moving any. The tank can be wheeled to any part of the garage, or if desired, to the curbing, to fill the car of some transient autoist. And the best part of it all is that the gasolene is never exposed to the air. In order to fill the wheel tank the gasolene hose, attached to the hose nozzle of a long distance pump, is inserted and the desired amount is drawn, and the gallon meter on the pump will register the amount of



WHEEL TANK FOR GASOLENE.

gasolene delivered to the wheel tank, preventing any overflow and serving as a check on the garage attendant. Then, wheeling the tank to the car to be filled, the gasolene hose is inserted in the reservoir of the car and the required amount pumped. The discharge register on the pump will tally the number of gallons delivered at each operation. The receptacle on the front of the tank is provided for the office copy of the charge slip, and is locked and can only be opened by the person authorized to attend to it and provided with a key. The hose

provided with each outfit is especially constructed to withstand the destructive effects of gasolene. The nozzle which is inserted in the reservoir of the car is so placed that evaporation is prevented and a shut-off screw controls the gasolene supply at the pump and also at the car. The wheels and also the guide wheels are provided with rubber tires, and each tank is provided with a magnetic gage which tells at a glance the amount of gasolene remaining. [S. F. Bowser & Co., Inc., Fort Wayne, Indiana.]

TIRE TRUNK AND COAT RAIL BAG.

THE perfect safety of this little tire trunk is one of the strongest appeals it makes to the autoist. First, it is so constructed that the cover locks and then the trunk is locked to the spare tire into which it fits, although it can be carried on the



NATHAN COAT RAIL BAG.

top of cars with stationary tops. Inner tubes and the many other articles indispensable to the tourist may be easily and safely placed in this receptacle and, though out of the way when



NATHAN TIRE TRUNK.

not in use, most accessible in the time of need. It is made in two sizes, each being made in two depths. For 30 and 32 inch tires there is the 6 inch depth, and for 34 and 36 inch tires the 9 inch depth. Besides black enamel, the trunks can be made in colors—maroon, blue, red, green, white, yellow and French grey. One of the illustrations shows the trunk in position and partly opened. The Coat Rail Bag is also a useful accessory. It is suspended from the coat rail of the car and does not interfere with the use of the rail. The bags are all made 24 inches long and 24, 30, and 36 inches wide, according to the width of the rail. The two large pockets can be used to carry road maps, veils, caps, gauntlets, and the like, while in the small pockets the goggles and smaller articles may rest securely. Hats, coats, and other articles may be stored in the bags, as occasion may require. They are made of grey mackintosh, black rubber cloth, and fabric leather in colors. [Nathan Novelty Manufacturing Co., Nos. 84-90 Reade street, New York.]

A PNEUMATIC HELMET.

TRACK cycle racing, paced by motor bicycles, which is still in vogue in various parts of Europe, ranks among the most dangerous sports of the day. This sport particularly is referred to as having been the cause of bringing into existence the pneumatic helmet, which consists of a leather cap shaped like a football, containing a rubber bladder. This is pumped up, and if the motor-cyclist is precipitated against a wall the rubber buffer saves his neck.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED SEPTEMBER 1, 1907.

- N**O. 864,841. Vehicle rim [with tire retaining means]. L. B. G. and J. Gast, Jr., Akron, Ohio.
 864,911. Vehicle wheel rim [for pneumatic tires]. J. M. P. Ott, Topeka, Kans.
 864,919. Adjustable hose nozzle. C. R. Ross, assignor of one-half to Ada E. Strecker, both of Kansas City, Mo.
 864,926. Cellular pneumatic tire. L. C. Schoonmaker, Bethany, Mo.
 864,952. Storm front for vehicles. O. A. Charles, assignor to Ross S. C. and Mfg. Co., both of Connersville, Ind.
 864,983. Spare tire holder for automobiles. L. P. McKurly, assignor of one-half to J. L. Snow, both of Boston.
 864,988. Milking machine and connections. T. Raven, Kilmarnock, Victoria.
 865,028. Vehicle tire [tread composed of rubber blocks]. O. L. Rogers, Cleveland, Ohio.
 865,030. Means for securing soft tread tires to rims. F. M. Hilton, J. S. Hilton and W. M. Hilton, assignors of one-half to H. Messer, all of Akron, Ohio.
 865,134. Rubber tire setter. H. L. Stump, Ypsilanti, Mich.
 865,137. Shower bath apparatus. Norman L. Wallen, Chicago.
 865,146. Hose nozzle. H. M. Albee, Nutley, N. J.
 865,184. Firchse holder. J. Kemm, New York city.
 865,288. Tread for pneumatic tires. E. K. Baker and C. G. Hawley, Chicago.
 865,306. Means for securing soft tread tires to rims. F. M. Hilton, J. S. Hilton, and W. M. Hilton, assignors of one-half to Harvey Messer, all of Akron, Ohio.
 865,326. Pneumatic tire casing or shoe. E. K. Baker and C. G. Hawley, Chicago.

Trade Marks.

- 19,668. Daimler-Motoren Gesellschaft, Unterturkheim, Germany. The word *Mercedès*. For sheet rubber, rubber tires, and foot wear and other articles of rubber.
 28,742. The Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. Fancy shield bearing the words *Wales Goodyear*. For rubber footwear.
 28,743. The same. The words *"Wales Goodyear."* For rubber footwear.
 29,185. Pacific Coast Rubber Co., Seattle, Wash. The words *Red Devil*. For rubber tires and inner tubes.

ISSUED SEPTEMBER 10, 1907.

- 865,355. Spraying device. I. Calman and J. Sabatelli, New York city.
 865,396. Resilient wheel [with rubber cushioned tread]. H. Klinger, Sitterdorf, Switzerland.
 865,411. Cushion tire wheel. C. A. Marien, St. Louis.
 865,422. Horseshoe pad. J. B. McArdle, West Orange, N. J.
 865,443. Tire shield. T. J. Sprinkle, Hillsboro, Ohio.
 865,458. Mold for pneumatic tires. E. Veith, Veithwerk, Germany.
 865,497. Pipe coupling and method of applying the same. D. M. Kenyon, assignor of one-half to J. B. Etherington, both of Bradford, Pa.
 865,498. Implement for coupling pipe. *Same*.
 865,507. Horseshoe [with pad]. M. A. Liebett, New York city.
 865,615. Air brake hose coupling. E. W. Shaw, Weir, Kans.
 865,682. Wheel [having rubber cushions within a steel tire]. H. Cramer, Sonora, Cal., assignor to Cramer Wheel Co., San Francisco.
 865,698. Rubber vehicle tire. [Clincher type, with filling of cellular cellulose.] J. J. Hendler, Chicago, assignor to Tiger Tire Co., a corporation of New York.
 865,699. Rubber wheel tire. *Same*.
 865,743. Tire. [Tubular case, with plurality of separate yielding supports within.] W. T. Wood, Nashville, Tenn.
 865,764. Fraser holder. M. F. Creahan, Philadelphia.
 865,765. Wheel for road vehicles [having a resilient tire within the steel tread]. J. Davies, Birmingham, England.

Trade Marks.

The American Wringer Co., New York city. The following for marking the kinds of goods specified:

- 24,041. The word *Household*. For mangles.
 24,043. The word *Eclipse*. For clothes wringers and mangles.
 24,045. The word *Gem*. For bench wringers.
 24,048. The word *Keystone*. For clothes wringers.
 24,049. The words *No. C Climax* 340 in border. For clothes wringers.
 24,050. The word *Colonial* in fancy border. For clothes wringers.
 24,051. The words *No. Daisy* 120 in border. For clothes wringers.
 24,052. The word *Mascotte*. For clothes wringers.
 24,053. The words *No. C Ideal* 140 in border. For clothes wringers.
 24,053. The word *Excelsior*. For clothes wringers.

- 24,057. The letter *C* in diamond shaped end view. For clothes wringers.
 24,058. The letter *B* in diamond shaped end view. For clothes wringers.
 29,396. Sewing Button Co., New York city. The word *Four Leaf*. For dressings, buttons, and rubber belts.

ISSUED SEPTEMBER 17, 1907.

- 865,996. Mask. P. K. Carr, Abbottford, N. Y.
 866,000. Strip guide for elastic fabrics. A. H. DeVoe, Elizabeth, N. J., assignor to The Singer Mfg. Co.
 866,000. Tire [Pneumatic, with concrete resisting cushion within the tread]. W. L. Linsbach, Wilkesport, Pa.
 866,134. Tire protector. W. H. Heermann, New York city.
 866,127. Hose shoe. M. D. Glassbrooke, Arizona, Ind.
 866,297. Pneumatic tire. G. Nages, Mandan, N. D.
 866,438. Shaving brush. R. L. Davis, Star, N. C.
 866,517. Manufacture of tubular or hollow bodies from plastic materials. L. H. Kentsch, Meissen, Germany.
 866,530. Repair device for machine tires. P. A. Traver, assignor to M. P. McNamee, both of New York city.
 866,579. Milking machine. J. Battell, assignor to D. H. Burrill & Co., both of Little Falls, N. Y.
 866,598. Rubber overshoe. J. D. Price, assignor of one-half to H. G. Powell, both of Cleveland, Ohio.

Trade Marks.

- 24,719. George A. Allen & Co., Boston. A wheel, over which are the words *One Half Brand*. For crude india rubber and gutta-percha.
 29,131. Revere Rubber Co., Boston. The word *Revo*. For belting, hose, and machinery packings composed of rubber.
 29,134. Eberhard Faber, New York city. The word *Emerald*. For rubber erasers.

ISSUED SEPTEMBER 24, 1907.

- 866,758. Art or process of reclaiming scrap or waste vulcanized rubber. O. A. Wheeler, Austin, Ill., assignor to himself, F. W. Garlick, C. I. Bear, and W. A. Vail, Chicago.
 866,759. Art or process of reclaiming scrap or waste vulcanized rubber. *Same*.
 866,807. Cushion heel for boots and shoes. M. J. Kearney, Brockton, Mass.
 866,874. Tire [comprising a circular woven wire element, a series of elastic blocks engaging in the meshes of the same, and a tread encircling the blocks]. J. E. MacKay, Los Angeles, Cal.
 866,907. Heel retainer for overshoes. O. Perry, Galesburg, Ill.
 866,927. Tire [comprising a coiled spring within an elastic casing]. R. A. Gehan, Buffalo, N. Y.
 866,986. Wheel rim [for pneumatic tires]. J. K. Turton, New York city.
 867,059. Hose and like coupling. S. B. Lear, San Francisco.
 867,108. Hose terminal. J. R. Carmer, Washington, D. C.

Trade Marks.

- 24,036. The American Wringer Co., New York city. The word *Novelty*. For clothes wringers.
 25,238. The Faultless Rubber Co., Akron, Ohio. Nipple with the word *Faultless* above it, and *Kantchoke* on its surface. For nursing bottle nipples.
 29,141. F. F. Rick & Co., Buffalo, N. Y. The word *"Panok."* For pyrographic outfits.
 29,251. Eberhard Faber, New York city. The word *Star*. For lead pencils and rubber erasers.
 29,252. *Same*. The word *Rubby*. For rubber erasers.
 29,325. The B. F. Goodrich Co., Akron, Ohio. The word *Monitor*. For machinery packing of rubber.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 21, 1907.]
 6,786 (1906). Pneumatic tire with studded leather brand. B. Brooks, Birmingham.
 *9,624 (1906). Hose pipe, specially wrapped. H. T. Bragg, Yonkers, New York.
 9,635 (1906). Pneumatic tire with protective head. M. H. de Hora, London.

- 9,636 (1906). Means for preventing the spreading of dust by road vehicles. A. B. Begg, Manchester.
- 9,710 (1906). Plastic composition of bitumen and rubber. C. A. C. De Caendenberg, Nice, France.
- 9,727 (1906). Pressure gauge for pneumatic tires. H. W. Southall and F. V. Madeley, Birmingham.
- 9,739 (1906). Driving belt of metallic wires enclosed in rubber. F. Rowley, Whaley Bridge, Cheshire.
- 9,742 (1906). Heel plate. W. Clark, Edinburgh, Scotland.
- 9,751 (1906). Non skid cover for tires. C. H. Wilkinson, Huddersfield.
- 9,775 (1906). Horseshoe pads. R. Heath, Mirfield, Yorkshire.
- 9,776 (1906). Valve. H. H. Perry, Enfield, Middlesex.
- 9,808 (1906). Elastic substance prepared from the gums of the Sapoteae. M. M. Dessau, Merton, Surrey.
- 9,809 (1906). Heel protectors. G. E. Vaughan, Redditch, Worcestershire.
- 9,835 (1906). Pneumatic tire air tubes. T. Y. Howcroft, Middlesborough-on-Tees.
- *9,862 (1906). Golf club with elastic striking plate. C. E. R. Martin and C. M. Rivers, Newark, New Jersey.
- *9,890 (1906). Hose coupling. E. J. W. De Forest and F. I. De Forest, Bradner, Ohio.
- 9,932 (1906). Elastic tire. T. E. A. G. and G. P. P. Marchant, London.
- 9,969 (1906). Solid tire. M. Breen, Enniscorthy, Wexford.
- 9,975 (1906). Pneumatic tire. T. Forde, Middleton, Ireland.
- *10,076 (1906). Armored pneumatic tire. A. Dow, New York city.
- 10,102 (1906). Wire wound hose pipe. J. Farris, Kensington, Victoria.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, AUGUST 28, 1907.]
- 10,164 (1906). Belt fastenings. E. F. Durand, Beckenham, Kent.
- 10,180 (1906). Spring wheel with rubber tire. R. M. A. Leps, Blaye, France.
- *10,208 (1906). Composition for electric conductors. British Thomson-Houston Co., London. (General Electric Co., Schenectady, New York.)
- 10,223 (1906). Leather pneumatic tire covers. M. Videcoq, Paris, France.
- 10,264 (1906). Pipe joint for use on motor vehicles. F. T. Jackson, Coventry Plating and Presswork Co., Coventry.
- 10,280 (1906). Medical appliance for genito-urinary diseases. U. D. Ezell, Kimball, Texas.
- 10,306 (1906). Spring wheel with rim or wood or wood and rubber blocks. T. W. Baker, London.
- 10,363 (1906). Golf ball. E. Hartley, Fenton, and J. W. Hartley, Stone, both in Staffordshire.
- 10,475 (1906). Packing ring to protect calendering machines from oil from bearings. H. Bostell, Obercaasch, Germany.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 4, 1907.]
- 10,607 (1906). Spring wheel with elastic tires. E. L. A. Olivier, Paris, France.
- 10,611 (1906). Rubber running out gear for gun carriages. K. Haussner, Buenos Aires, Argentina.
- 10,628 (1906). Rivets for pneumatic tires studded tread bands. C. H. Wilkinson, Huddersfield.
- 10,636 (1906). Pneumatic tire cover. C. H. Wilkinson, Huddersfield.
- *10,679 (1906). Swimming appliance with pneumatic pad. Z. T. Cox, Salt Lake City, Utah.
- *10,683 (1906). Cover for scissors handles. C. W. Tindall, Lynnville, Iowa.
- 10,704 (1906). Rubber substitute for filling tires. L. Roland, Paris, France.
- 10,705 (1906). Tire composed of the preceding substance. L. Roland, Paris, France.
- 10,731 (1906). Overshoes for workmen. G. Kappler, Engel-Zürich, Switzerland.
- *10,779 (1906). Pneumatic balls for games. A. T. Saunders, Akron, Ohio.
- 10,820 (1906). Vulcanizer for india-rubber. W. B. Arkless, Erdington, Staffordshire.
- 10,848 (1906). Stiffener for boot toecaps. J. Morath, Oeflingen, Baden, Germany.
- 10,854 (1906). Exercising apparatus. F. W. Croucher, London.
- 10,864 (1906). Spring wheel with pneumatic tube within the wooden tire. A. M. N. P. Laporte, St. Etienne, France.
- 10,870 (1906). Spring wheel with rubber cushions. J. Johnston, London, and H. C. Powell, Westminster.
- 10,899 (1906). Non skidding device for pneumatic tires. H. Edmunds, Westminster.
- 10,899 a. Fastening for tire non skids. H. Edmunds, Westminster.
- 10,935 (1906). Base for earthenware vessels. G. Parr, Leicester.
- 10,986 (1906). Molding tire covers. F. Veith, Veithwerk, Odenwald, Germany.
- 11,049 (1906). Pneumatic tire tread. H. J. and F. E. Jones, Leytenstone.
- 11,050 (1906). Elastic (non pneumatic) tire. H. J. and F. E. Jones, Leytenstone.
- *11,105 (1906). Horseshoe pad. T. W. J. McGann, Washington city.
- *11,106 (1906). Horseshoe pad. T. W. J. McGann, Washington city.
- 11,115 (1906). Sectional elastic tire. A. T. Collier, St. Albans, and Reilloc Tyre Co., London.
- 11,145 (1906). Puncture closing composition for tires. P. Rensch, Consenheim, Germany.
- 11,165 (1906). Massage apparatus. A. N. Gore, East Finchley.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 11, 1907.]
- 11,167 (1907). Cable for diving apparatus. J. Holman, London.
- 11,200 (1906). Belt fastener. C. H. Griffiths, Manchester.
- 11,225 (1906). Burglar alarm. P. Brauer, Wittenberge, Germany.
- 11,230 (1906). Valve with rubber parts. W. H. Boshell, London, and L. R. S. Tolman, Putney Hill.
- 11,252 (1906). Detachable rim for tires. J. F. Janes, London.
- *11,273 (1906). Self-sealing pneumatic tire. A. Dow, New York city.
- 11,300 (1906). Pneumatic tire. H. J. Lawson, London.
- *11,360 (1906). Joint-making packing. A. N. Hartmann, Paterson, New Jersey.
- 11,378 (1906). Hose couplings. J. O. Spang, London.
- 11,444 (1906). Pneumatic tire cover, of leather. E. L. Harris, London.
- 11,451 (1906). Bottle stopper washer. C. H. Gray, India Rubber, Gutta Percha and Telegraph Works Co., Limited, Silvertown, London.
- 11,537 (1906). Spring wheel with elastic tire. E. Peltier, Sceaux Robinson, France.
- 11,537 (1906). Tire composed of several pneumatic tubes. J. A. Mays, Hampstead.
- *11,605 (1906). Removable inextensible rim flange. J. G. Lorrain, London. (R. P. Scott, Cadiz, Ohio.)
- 11,671 (1906). Anti skidding device. T. Browett, London.
- 11,687 (1906). Suspension wheel with rubber tread surface. E. Batault, Geneva, Switzerland.
- 11,720 (1906). Rim for solid rubber tires. M. H. Hora, London.
- 11,747 (1906). Elastic tire. A. T. Eyton, Holywell, Flintshire.
- 11,752 (1906). Pneumatic tire. R. Ruwet and E. Sabatier, Lacken, Belgium.
- 11,809 (1906). Elastic tire. F. G. Garrett, Southall, Middlesex.
- *11,825 (1906). Spring wheel with rim connected to the felloes by elastic balls or plugs. P. A. Newton, London. (H. Bell, Stamford, Connecticut.)
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 18, 1907.]
- 11,923 (1906). Pneumatic tire. F. A. Ellis, Kennington, London.
- 11,924 (1906). Non skid studs for pneumatic tire. H. Bremer, Neheim-on-the-Ruhr, Germany.
- *11,941 (1906). Vulcanizing rubber to leather. G. F. Butterfield, Boston, Massachusetts.
- *11,960 (1906). Spring wheel with tread of rubbered fabric. I. Hodgson, Minneapolis, Minnesota.
- 12,020 (1906). Hose pipe. G. W. Parker, Hendham Vale Works, Manchester.
- 12,073 (1906). Golf ball. C. T. Kingzett, Kensington, and E. P. Kingzett, Caterham, Surrey.
- 12,108 (1906). Wheel rim with detachable flange. M. Korth, Cologne, Germany.
- 12,251 (1906). Metal protector for pneumatic tires. A. Lauener, Neuchâtel, Switzerland.
- 12,272 (1906). Golf ball. P. A. Martin, Birmingham, and J. Stanley, Balsall Heath.
- 12,330 (1906). Tire tread composed of a series of rubber blocks. J. Slee, Newton-le-Willows, Lancashire.
- 12,389 (1906). Spring wheel with rubber tread. W. S. Boulton, Wandsworth Common.
- 12,399 (1906). Game-lawn billiards and the like. T. L. Hague, Conway, North Wales.
- *12,406 (1906). Storage for spare tires on motor vehicles. M. Ebret, Philadelphia, Pennsylvania.

THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 374,515 (Feb. 13, 1907). Garnier, Elastic tire.
- 374,468 (Jan. 30). W. H. Brienlow, Artificial rubber.
- 374,549 (Feb. 11). Goodacre, Robertson and Blackburn, Clincher head.
- 374,635 (Feb. 14). E. Vetter, Protective anti-skid.
- 374,679 (Feb. 15). Devaemmes, Detachable rim.
- 374,760 (Feb. 16). C. V. Petit, Cushion wheel.
- 374,782 (Feb. 18). W. H. Bird, Elastic tire.
- 374,957 (Feb. 21). Société Industrielle des Téléphones, Cushion tire.
- 375,085 (Feb. 26). F. A. Thiebault, Elastic tire.
- 375,118 (Feb. 27). Société dite Raffineries Reunies de Caoutchouc, Rubber extracting process.
- 375,268 (Jan. 7). F. A. Mongin, Anti-skid.
- 375,222 (Jan. 22). H. H. Poyier, Detachable rim.
- 375,234 (Feb. 6). H. Tanche, Clincher tire.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

The Obituary Record.

HORACE H. TYER.

HORACE H. TYER, president of the Tyer Rubber Co. (Andover, Massachusetts), died at his summer home, Pigeon Cove, Mass., on Friday, October 4, at the age of 63. Mr. Tyer was born in New Brunswick, New Jersey, in 1844, at the time that his father, one of the pioneers in rubber, was engaged in business there with Horace H. Day. Indeed, the son was christened Horace H. Day Tyer, although he never used the full name.

About 1856 or 1857 Henry George Tyer, the father, began the

natural reserve that amounted to almost a shyness. At the same time he never shirked public duties, and in a quiet, unostentatious way proved himself a friend to scores and was ever a champion of the right in town and business affairs. Not possessed of the pioneer spirit of his father, the founder of the company, he very wisely became a conservative, but one who never strove to handicap or lessen the enterprise or energy of those with whom he was associated. To those who knew him best he showed a character simple, wholesome, and lovable, and his death at a comparatively early age is a calamity. The New England Rubber

Club, of which he had long been a member, at a special meeting passed the following resolutions:

Whereas The sad news of the sudden death of our friend and fellow member, HORACE H. TYER, has come as a great shock to the members of the New England Rubber Club, the son of one of the honored pioneers in his particular branch of the rubber industry, and himself intimately connected with our trade during his entire business career, and president of his own organization for the past quarter of a century, his loss will be most keenly felt by all who have had the privilege of personal or business associations with him.

Resolved, That this Club extend to his family its sincere and most heartfelt sympathy.

Resolved, That these resolutions be spread upon the records of the Club, and copies engrossed and sent to his family and to his business associates.

GEORGE P. WHITMORE, Chairman,

ELSTON E. WADBROOK,

ALEXANDER H. PAUL,

Committee on Resolutions.

Resolutions of regret were adopted also by the Tyer Rubber Co., the Rubber Sundries Manufacturers' Association, the Andover Club, and the directors of the Andover Press.

RUD A. ZIETZ.



HORACE H. TYER.



RUD. A. ZIETZ.

manufacture of rubber goods, first in Ballardvale and then in Andover, Mass., making the latter town his home. Here his son Horace attended Phillips Academy, from which institution he was graduated and at once entered his father's factory to learn the business. On the death of his father, which occurred in 1880, he became treasurer of the company, and in 1882 was elected to the presidency of the company, which office he filled up to the time of his death. Mr. Tyer married Miss Katherine L. Buss, of Medford, Mass., who survives him, together with two daughters and a son. The latter, Henry G. Tyer, who was named after his grandfather, is at present connected with the factory end of the Tyer Rubber Co., and is learning the business.

The funeral services were held at Christ Episcopal Church, Andover, the Rev. Frederick Palmer, rector, officiating, music being furnished by the vested choir of boys. The honorary pallbearers were the Hon. John N. Cole, speaker of the Massachusetts house of representatives; Nathaniel Stevens, Frederick H. Jones, Frank T. Carlton, the Rev. F. R. Shipman, and T. Dennie Thompson. The bearers were the superintendents and heads of departments of the Tyer Rubber Co., and were eight in number. The interment was in the family lot at Christ Church Cemetery, Andover.

Mr. Tyer was a director in the Andover National Bank, trustee of the Andover Savings Bank, trustee of the Punchard Free School, president of the Andover Press, and senior warden of Christ Episcopal Church.

Although he was not widely known in the rubber trade, those who did know him appreciated fully what a sterling character his was. It was difficult for him to mix with men because of a

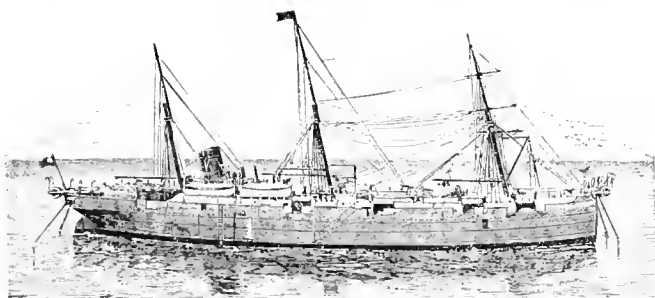
RUDOLPH AUGUST ZIETZ, long engaged prominently in the rubber trade at Pará, died suddenly in New York on September 11, in his fifty-ninth year. He had suffered an apoplectic stroke on the preceding day, and his last hours were spent in a hospital. Mr. Zietz was born January 22, 1849, in Pernambuco, Brazil, where his father, Rudolph Zietz, was engaged in business. His mother was Louise Ackerman. When the son was about five years old the family returned to Germany, to the free city of Lübeck, of which the father became a senator. Rudolph Zietz acquired his education there, and discharged his military obligation to his country. On reaching the age of 21, and having been supplied with some capital by his father, he went to the West Indies. His mercantile career began in Trinidad, leading him successively to China, Manila, and, finally, to Pará, where he became interested in the rubber trade.

It was in 1884 that Mr. Zietz became established at Pará, and for about twenty years he was an important factor in rubber, under the registered firm name of Rud. A. Zietz. His transactions are reported to have amounted in some years to £300,000 or £400,000. Incidentally, he served for a long term as the Danish consul at Pará. During much of this time Messrs. G. Amsinck & Co., of New York, were his bankers and his correspondents in the United States, and when he retired from business he took up his residence in New York, where he possessed a number of friends in the trade. Mr. Zietz was unmarried and without relations in America. His body was cremated and the ashes sent to Lübeck, to the grave of his mother. Mr. Zietz was held in the highest esteem by all with whom he came into contact, on account of his sterling qualities, both as a business man and as a friend.

NEW CABLE LINES FROM NEW YORK.

THE laying of the new direct cable between New York and Havana was completed on October 18. It was built for the Commercial Cable Co. of Cuba by the India Rubber, Gutta Percha and Telegraph Works Co., Limited, and laid by the latter company's cable steamer, the *Silvertown*. The steamer sailed from London on September 11 for Cuba, where laying the cable was begun. She started out from Havana on October 4 with 1300 miles of cable coiled in three circular tanks. She made about 8 miles an hour, and by noon on the 5th 150 miles of cable had been laid. On the second day out the *Silvertown* laid 185 miles, on the third day 160, on the fourth the same amount, on the fifth 163, on the sixth 201 miles, and on October 11, when the *Silvertown* anchored out from New York long enough to buoy the cables, it had paid out 145 miles more, or a total of 1164 miles. The New York shore end, of heavier material, was laid by another boat, and on the date first named above the *Silvertown* completed her work by splicing the shore end to the main cable at the buoy. The new cable was, without ceremony, opened for public business on October 21.

In laying the new Havana cable the old barkentine rigged steamer *Silvertown*, which has been laying cables in all parts of the world since 1873, has established a record for the work which beats her own record, made when it laid the Pacific cable from Honolulu to San Francisco, and also beat the best achievements of the modern cable steamers. The *Silvertown* is 350 feet long, 55 feet broad, and 36 feet 6 inches deep, fitted with engines of



THE CABLE STEAMER "SILVERTOWN."

[Engaged recently in laying the New York-Havana cable.]

1800 H.P. and steams at a speed of 10½ knots; her tonnage is rated at 4035. She has carried at one load 2600 knots [=about 2600 miles] of sea cable.

The Commercial Cable Co. of Cuba, incorporated in September, 1900, under the laws of New York, forms part of the system which includes the Commercial Cable Co., with five lines across the Atlantic, and the Commercial Pacific Cable Co., with a line across the Pacific, touching at Manila—altogether about 25,000 miles of submarine cables—in addition to the land lines of the Postal Telegraph Co. in the United States. For operating purposes the officials of the Mackay Company—the holding concern of all the corporations named above—look upon their land and submarine lines as forming one system. The new cable line to Cuba, which has cost between \$1,400,000 and \$1,500,000, has been paid for, it is understood, entirely out of earnings of the Mackay companies.

* * *

MENTION has not been made in these pages before of the cable laid recently between New York and Colon, via Guantanamo, Cuba, by the Central and South American Telegraph Co., of New York. This was opened for commercial business on August 1, the laying having been completed on that day by the *Colonia*, the cable steamer of the Telegraph Construction and Maintenance Co., Limited, of London. The operation of the new company has rendered communication with the southern countries more reliable, shortened the time, and lessened the cost. The length of the new cable is 2,263 knots. The Central and South Ameri-

can Telegraph Co., a New York enterprise, have cable lines down the Pacific coast from the isthmus of Panama to Valparaiso.

CRUDE RUBBER INTERESTS.

MR. IVINS'S STORY OF RUBBER.

THE story of "Rubber as a World Product," told entertainingly in the *American Monthly Review of Reviews* by Mr. William M. Ivins, the eminent New York lawyer, who was some time president of the General Rubber Co., and at times has sustained other important relations to the rubber trade, covers the history of rubber and its applications about as fully as could be expected within a single magazine article. Naturally an article of such interest has elicited some criticism, as for instance from *The Times of Ceylon*, where Mr. Ivins says: "Cultivated rubber as yet plays no real part in the world's markets, not more than 100 tons having yet come into consumption in any year." The point of *The Times's* criticism lies in the fact Ceylon and the Malay States alone had exported during the twelve months preceding the publication of Mr. Ivins's article about 670 tons of cultivated rubber, in addition to a considerable aggregate supplied by plantations elsewhere.

The newspapers on the Amazon are yet to be heard from in response to the statement by Mr. Ivins that "the mortality in the state of Amazonas, in Brazil, for example, corresponds with almost diabolical exactness to the number of tons of rubber produced, so that it is said that every ton of Brazilian rubber costs a human life." Seeing that the state of Amazonas has long contributed about 15,000 tons of rubber a year to the world's markets, it would be cause for wonder that the supply could be kept up if Mr. Ivins's information were correct, seeing that the whole population of the state is probably not more than 500,000, and all the inhabitants are not all rubber gatherers.

STATISTICS OF RUBBER PRODUCTION.

GAMBIA (BRITISH AFRICA).

	Pounds.		Pounds.
a 1883	52,033	1900	125,446
1884	257,285	1901	146,573
1891	246,690	1902	65,283
1893	45,298	1903	19,551
1897	423,103	c 1904	39,934
1898	481,020	1905	9,071
b 1899	128,912	1906	10,454

a—First exports recorded.

b—Unofficial figures.

c—Including rubber in transit from French possessions.

NEW CALEDONIA.

	Pounds.		Pounds.
1899	3,352	1903	24,789
1900	50,842	1904	37,617
1901	36,324	1905	49,823
1902	18,730	1906	80,984

Prior to 1899 exports of 66 pounds were taken account of by the customs department.

NOTES.

THE newspaper *A Provincia do Pará* reports that between the rivers Araguaya and Tapirapi, on the eastern borders of the state of Matto Grosso, Brazil, mangabeira rubber has been found in great quantities, but thus far it has been neglected for the more highly prized *Hevea* rubber.

Monthly shipments of rubber (wild and cultivated) are being made from the property of The West Coast Rubber Co. in Guatemala, to New York. The first shipment, 2,370 pounds, realized 76 cents a pound.

A RUBBER NOSE.—A student in the dental department of the University of Pennsylvania, after all the physicians there had failed to repair the damage to the nose of a miner who had been frost bitten, made impressions of the man's face and succeeded in making a flesh-colored nose of vulcanite rubber, which is held in place by heavy bowed glasses. A slight disfigurement of the upper lip is disguised by a false mustache.

TIRES AT THE AUTOMOBILE SHOW.

THE eighth annual automobile show of the Automobile Club of America, held in New York, October 24-31, at the Grand Central Palace, was of more than usual interest to the rubber trade. Not only is it on a larger scale than previous automobile shows in New York, but many of the tire concerns had new features to exhibit.

The tire exhibits showed a continued departure from the era of "freaks" in tire construction, toward the smooth, round, wrapped-tread clincher type. Antiskid features were not numerous and were simpler, the popular type having a few rows of rivets embedded in the tread, without leather. There were two or three new removable rims, but several of last year's types have been withdrawn from the market. Detachable flanges were fewer than last year, with no new ones. The turn-buckle type seems the most popular. There were several new tires, but several old companies did not appear. This cushion type of tire has about disappeared from the market. The Bailey tread has grown in popularity.

Morgan & Wright exhibited the Dunlop, standard clincher, and quick detachable clincher mounted on the new Midgley rim. A conspicuous feature of the exhibit was a 40 x 4 inch tire with Bailey tread.

The Goodyear Tire and Rubber Co. showed their standard line of tires—detachable and clincher—and their "Universal" rim.

The B. F. Goodrich Co. exhibited their regular types of smooth and narrow flat tread, and their detachable rim.

The Fisk Rubber Co. exhibited their regular line of tires, with flat, round, and Bailey treads. They have also brought out a removable rim, with a felloe band, raised on one side, upon which an inflated and mounted tire can be slipped and held on by wedge-headed through bolts, on the general Vinet principle.

The Michelin Tire Co., now American as well as French manufacturers, showed their standard tires, and the beautiful "*Semelle Michelin*" (Michelin tread). They also showed their well known removable rim.

The Pneu l'Electric Co. showed the tires made by the Société Industrielle des Telephones, and the Samson, which they are now licensed to use. They also had an exhibit of insulated wire.

The Automobile Utilities Co. showed their Shaw self sealing inner tube, the tube being double, with a layer of thick, gummy material within.

The Crescent Parts Co. showed their removable rim, known formerly as the Harburg rim.

The Ajax-Grieb Rubber Co. showed their regular tires.

The Republic Rubber Co. showed their round and flat tread tires, the flat tread having two very deep grooves. They also showed twin solid truck tires, and featured their new detachable flange rim.

Herz & Co. showed the Miskolczy (Vienna) flat tread and antiskid tire, with embedded rivets and a thick rubber cushion between the fabric and the tread.

The Empire Automobile Tire Co. showed their smooth and thickened tread pneumatics, and their buttoned tire case.

Charles J. Downing showed the Genesee clincher tires.

The Motz Clincher Tire and Rubber Co. showed their regular solid tires and their dual-tread solid cushion tire.

The Leather Tire Goods Co. showed the Woodworth tread, the Kantskid clincher, and their leather covered inner tube.

The G. & J. Tire Co. showed, besides their standard type, with thickened, flat tread, a smooth, round, wrapped tread type.

The Hartford Rubber Works Co. had their regular line of clincher and Dunlop tires, and also a combination type, being the wired-on tire with a clincher bead added. They also furnish the Midgley tread already ground or flat.

The Diamond Rubber Co. showed their standard pneumatic and wire-mesh-base solid tires, and their improved antiskid, with narrow, flat, raised tread, the rivets imbedded in the tread, without any leather. They showed smooth round and flat treads, their Marsh rim, and their new demountable rim, used in the Vanderbilt race, but not before exhibited at an automobile show. The rim is slipped over the felloe band and held by clip-headed through bolts.

The National Sales Corporation showed Pirelli tires.

The Mitchell Punctureless Tire Co. showed one of their tires running against a roller, sections of the rim being cut out to show the action of the tire.

The Pennsylvania Rubber Co. showed their regular line of round, flat, smooth and corrugated treads and antiskid tread.

The Firestone Tire and Rubber Co. displayed their pneumatics prominently, as well as great and small solid tires, and a large fire hose wagon wheel with twin solid tire. They also showed their removal rim, and their dual-tread tire.

The Swinchart Clincher Tire and Rubber Co. showed their standard solid cushion tire, and their twin truck tire with central chain to prevent slipping.

The Continental Chautahone Co. showed their regular tires, made to fit American rims. They also showed their adaptation of the Vinet removable rim, the felloe band being adapted to hold any standard rim. It can be fitted on any wheel.

The Trenton Rubber Manufacturing Co. showed their Home detachable tire, in round, flat and thickened tread, with red and gray tubes, floor mats, rubber matting and thermoid wire-meshed brake lining, packings and rubber matting.

The Joseph Stokes Rubber Co. had a fine display of hard rubber goods, including various hard rubber automobile accessories, as steering wheels, lever grips, tank caps, faucets, battery jars and covers, besides hard rubber surgical goods, shaving brushes, water-meter paddle and turbine wheels, dye-spinning tanks, new and old types of telephone receivers and mouth-pieces, and many other hard rubber specialties, the whole making a beautiful display, which attracted much attention.

The Long & Mann Co. showed their tire tools and their new detachable rim. Half of this rim is fast, while the other half is held on by through bolts, and also by offsets underneath, which fit into tangential slots in the felloe band.

Arthur H. Middleton showed his clincher block solid tire, the rubber sections being capped with iron.

The Morris Auto Co. showed their standard tire protector, which is a thick rubber and fabric casing, with inextensible edges, and holds fast so long as the tire is inflated.

The Newmastic Tire Co., the Elastic Tire Filling Co., William Wooster and Smalley Daniels showed their elastic tire fillers. The Newmastic Tire Co. had a "Newmastic" and a pneumatic tire mounted alongside, so that their comparative resilience might be tested with a hinged lever.

The Gilbert Manufacturing Co., the Allen Auto Specialty Co., the Nathan Novelty Manufacturing Co. and Post and Lester showed their tire cases. The buttoned type of tire case was much in evidence. The Traver Blowout Patch Co. also showed their patches.

In addition to the displays mentioned in the preceding lines, several of the rubber manufacturing companies exhibited automobile clothing, rubber mats and matting, and hard rubber goods for automobiling uses.

COMING EVENTS.

THE annual automobile show under the direction of the Association of Licensed Automobile Manufacturers will be held at the Madison Square Garden, in New York, November 2-9. The leading tire companies will be represented at this show practically by the same exhibits that were seen at the Grand Central Palace.

The Chicago automobile show will open on November 30 and continue until December 7.

SEA ISLAND COTTON PRICES.

AT the meeting of the Sea Island Cotton Association, at White Sulphur Springs, Florida, on September 12, President Harvie Jordan, in his annual address stated that in 1893 the Sea Island crop of 75,000 bales, selling at about 15 cents a pound, yielded the growers, say, \$5,000,000, while last year's crop of only 60,000 bales, selling at higher prices, brought over \$6,000,000. He said: "To-day every county in the [Sea Island cotton] belt is organized, and you are getting 35 cents for your better grades. This is the result of cooperation." He advised his hearers to study the manufactured products and trade conditions—to "put in more brain work along this line." The association's committee on prices reported in favor of the following minimum prices for Sea Island grades, and the report was adopted: Fancy grades, 35 cents; No. 1, 33 cents; No. 2, 32 cents; No. 3, 31 cents; No. 4, 30 cents. No prices were fixed for lower grades. *The Cotton Journal* says that the Sea Island cotton growers are well supplied with good warehouses which have been constructed in the various counties during the past two years by members of the above named association. The growers are beginning to pool their cotton for sale in large blocks and abandoning the old fashioned method of retailing a bale at a time on the streets.

An important firm of cotton factors in the South making a specialty of Sea Island grades, in response to the request for an opinion on the price situation, write:

TO THE EDITOR OF THE INDIA RUBBER WORLD: It is difficult to say anything regarding the prospects of the producers of cotton being able to control prices this season. If the crop is materially greater than last year's, and we believe it is, we do not see how in view of the general tightness of money it will be possible to hold it. The only man who can really hold cotton is the farmer, and his ability to do so depends on whether he owes his local storekeeper or not. In ordinary years a country merchant can probably get an extension of time from his wholesale correspondent in the city, but we do not believe he will be able to obtain that this year and so he may bring more pressure than usual to bear upon the farmer to make him sell. In addition to this, present prices are undoubtedly profitable to the farmer.

It looks as if there was going to be a good deal of low grade cotton in this crop. This comes into competition with the best growth of Egyptian, and as these are likely to be in full supply this year it appears to us that low grade Sea Island will have to approximate these Egyptian qualities in price. This may be brought about the more speedily because we do not think that factors are willing to tie up their money in advance on Sea Island cotton on the present basis of values. Yours truly,

Savannah, Georgia, Octo'ber 4, 1907.

RUBBER FROM DISPUTED TERRITORY.

THE Peruvian Amazon Rubber Co., Limited, was registered in London on September 20, with £1,000,000 [= \$4,866,500] capital, of which £300,000 is in preference shares, to acquire certain rubber properties in the upper Amazon region, beyond Iquitos, owned by Julio C. Arana y Hermanos, and called "Colonia Indiana," "El Encanto Angelia Pevas," and "Xanay." There is no initial public issue of shares. The list of signatures is headed by Julio C. Arana, whose address is given as Warriston, North-end road, Hampstead, N. W., London. The rubber properties above referred to lie, at least in part, within the region embraced by the concession granted by the government of Colombia to Caño, Cuello & Co., of Bogotá, which concession is the basis of an American company recently formed to exploit rubber. This concession has been the subject of not a little correspondence between representatives of the governments of Peru and Colombia, between which countries a dispute exists over

the ownership of part of the territory. Some of this correspondence was reprinted in *THE INDIA RUBBER WORLD* October 1, 1907 (page 24), after its appearance in leading newspapers in New York, London and elsewhere.

Messrs. Arana Brothers have been established for something more than two years in shipping rubber from the region in dispute, via Iquitos to Liverpool and New York, claiming to be within Peruvian territory, and paying export duties to Peru at Iquitos port. *THE INDIA RUBBER WORLD* is in possession of the following figures regarding the Arana shipments from Iquitos:

DATE.	Liverpool.	New York.
December 29, 1904.....	kilos 91,433	5,265
January 10, 1905.....	1,440	...
April 14, 1905.....	73,253	4,515
May 10, 1905.....	45,480	...
June 14, 1905.....	5,767	...
July 13, 1905.....	75,835	...
August 25, 1905.....	63,833	...
October 15, 1905.....	90,102	...
Total, first year.....	447,232	9,780
December 30, 1905.....	76,698	27,607
January 24, 1906.....	25,245	...
February 23, 1906.....	13,270	20,000
May 23, 1906.....	77,000	...
September 23, 1906.....	84,493	...
October 24, 1906.....	23,053	...
November 25, 1906.....	21,271	...
Total, second year.....	321,030	47,607
Total, two years.....	768,871	57,397
Grand total, Liverpool and New York, 826,258 kilos.		

It is stated that, in addition to the above figures, a small shipment remained to complete the output for 1906, owing to obstructions to navigation toward the end of the latter year.

RUBBER PROFITS ON THE KASAI.

THE trading profits for 1906 of the Compagnie des Kasai—the rubber monopoly in the Kasai region of the Congo State—were larger than in any former year, amounting to 11,268,029.65 francs [= \$2,174,920.72]. The net profit, after providing for the cost of planting rubber as required by law, interest on bonds, etc., was 8,033,657.22 francs [= \$1,550,495.85]. After paying 6 per cent. on the capital shares, directors' fees, agents' commissions, and adding to the reserves, there remained for the holders of the beneficiary shares (common stock) 7,035,000 francs [= \$1,357,755], or 1750 francs per share.

The capital of the company is in 4020 shares of 250 francs each, totaling 1,005,000 francs [= \$193,965], and an equal number of beneficiary shares "without designation of value." It is the latter which participate in the large profits above referred to. One half the beneficiary shares are held by the 14 companies participating in the Kasai syndicate, one half by the Congo Free State. If the beneficiary shares be given the same par value as the capital stock (250 francs), as is the custom in issuing "common stock" in America, the Kasai dividend of 1750 francs per share would work out at 700 per cent. for the year. Of the dividend, 1000 francs per share were paid in April 15 last and 750 francs on October 15. A recent Brussels bourse quotation for these shares "without designation of value" was 16,000 francs [= \$308.80]; the highest quotation for the year (on January 28), 20,575 francs.

The net profits of the Kasai syndicate since the beginning, derived chiefly from its rubber trading, have been:

In 1902.....	1,210,709.23	francs	[= \$233,666.26]
In 1903.....	3,497,393.01	francs	[= 677,996.85]
In 1904.....	5,334,797.06	francs	[= 1,029,615.82]
In 1905.....	7,534,684.68	francs	[= 1,455,885.40]
In 1906.....	8,033,657.22	francs	[= 1,550,495.85]

For rubber planters: Mr. Pearson's book, "What I Saw in the Tropics."

THE MEXICAN RUBBER PLANTERS.

IN response to a circular of invitation mentioned in the last issue of this paper (page 18) a meeting of rubber planters was held on October 9-10 in the city of Mexico in the club room of the *Mexican Herald* building. The first session was opened with an address of welcome by Paul Hudson, general manager of the *Herald* and a member of the invitation committee, followed by an address from Olegario Molina, minister of fomento of the republic.

William Vernon Backus was elected chairman. Two days were devoted to addresses and papers relating to rubber culture and discussions thereon, except for the time during the second day taken to form a permanent organization, under the name Rubber Planters' Association of Mexico. The first regular meeting is to be held in the city of Mexico on February 12, 1908. On the evening of the first day of the planters' conference they attended a banquet, at a leading Mexican restaurant, at which the guest of honor was Andres Aldasoro, under minister of fomento, who, speaking in behalf of the government, said that all the necessary guarantees and every possible aid would be extended in the development of rubber culture in Mexico.

Dr. Olsson-Seffer, in a lengthy paper on "The Present Condition of Rubber Culture," said that there were in Mexico 118 plantations, embracing approximately 95,000 acres, devoted wholly or in part to rubber culture, and representing an investment of \$60,000,000 Mexican, or about \$30,000,000 gold.

James C. Harvey spoke on "Cacao as an Adjunct to Rubber Culture," and H. Wegge on "Manuring the Rubber Tree." Ignacio Carranza opened a discussion on "The Rubber Planter and the Labor Supply." He favored the importation of laborers from southern Europe, and the general sentiment of those who spoke was adverse both to the Japanese and the American negro for plantation work in Mexico.

The suggestion was made by J. P. Taylor that the government should establish regulations for the control of trading in rubber, for the reason that the Indians, who now are "stealing about three-fourths of the wild rubber of Mexico," may be expected sooner or later to begin stealing rubber from cultivated trees.

The selection of officers of the Rubber Planters' Association of Mexico resulted as follows:

President—O. H. HARRISON, La Zacualpa Rubber Plantation Co., San Francisco.

First Vice President—JAMES C. HARVEY, Mexican Mutual Planters' Co., Sanborn, Mexico.

Second Vice President—PEHR OLSSON-SEFFER.

Secretary—[To be named by the directors.]

Treasurer—WILLIAM VERNON BACKUS, interested in a number of planting companies, Mexico City.

Directors—W. C. Gruels, O. V. Petterson, A. B. Coates, L. A. Ostien, Ignacio Carranza.

The names of those taking part in the planters' convention are reported as follows by the *Mexican Herald*, to which journal credit is also due for most of the details in this report. It is understood that the test is not a complete one:

DELEGATES FROM STATES.

Carlos Garza, from Tamaulipas.

Manuel Casares Escudero, from Yucatan.

Deputy Ignacio Muñoz, from Veracruz.

Luis Ottinger, from Guerrero.

Deputy Domingo Leon, from Tabasco.

REPRESENTING PLANTING COMPANIES.

St. Paul Tropical Development Co. (St. Paul).—Professor L. A. Ostien.
Tabasco Plantation Co. (Minneapolis).—F. W. Moore and George E. Davis.

Mexican Imperial Plantation Co.—William Vernon Backus.

Mexican Mutual Planters' Co. (Chicago).—James C. Harvey.

The Mexican Rubber Co., Limited (London, England).—H. E. Levesley.
Nebraska Plantation Co.—Professor V. O. Petterson.

The Obispo Rubber Plantation Co. (New York).—Maxwell Riddle.

Rock Island Tropical Plantation Co.—Prof. V. O. Petterson.

Trinidad Rubber Co.—"Buena Ventura" plantation (Los Angeles).—Clarence Harvey.

Chiapas Land Co. R. Olsson Seffer.

The Chilean Exploration and Development Syndicate, Limited (London, England).—P. O. Brenier.

El Palmar Plantation Co.—C. Minor and A. Reynaud.

Continental Commercial Co. (St. Louis).—H. E. Levesley.

Hacienda Providencia—John Shelly.

Mexican Gulf Agricultural Co. (Kansas City).—C. H. Precht.

GUESTS PRESENT.

Dr. Pehr Olsson-Seffer, representing several planting companies; James Gunder, of Vera Cruz; Ralph Root, of New York; K. C. Lock, W. D. Shaw, W. S. Windock, Dr. J. H. T. Stempel, and W. C. Cressy.

* * *

THE *Mexican Herald* quotes Montgomery Tarr, described as being exceptionally well informed on the subject, as predicting the exportation during the current fiscal year (beginning July 1) of 100 tons more rubber from Mexico than during the preceding year, owing to the development of the rubber plantations.

THE "MANICOPA" RUBBERS.

EARLY in the past month Mr. Reginald W. Wickham, of London, was in New York, en route from a visit to Peru and Bolivia, which took him 2,500 miles up the Amazon and its tributaries, the Jurua and Gregoria, investigating rubber interests. He reports finding some magnificent growths of *Hevea* rubber—up to 14 feet 3 inches in circumference.

Mr. Wickham at one time visited the "manicoba" rubber regions in the Brazilian state of Bahia, a description of which by Mr. Ashmore Russan was reviewed in THE INDIA RUBBER WORLD for October 1 (page 9). Mr. Wickham states that some rubber properties in Bahia have been marketed recently to a syndicate in London.

Another recent visitor to New York was Mr. William B. Dulley, manager of The Dumont Coffee Estates, Ribeirão, São Paulo, Brazil, after a visit to some Mexican rubber plantations. The Dumont estates are owned in London, Mr. H. K. Rutherford being interested, and it is partly due to the latter's suggestion that rubber planting has been taken on. About 400 acres have been planted within a year to *Manihot Glaziovii*, the rubber tree of Ceara being preferred by Mr. Dulley to the Jeque or "manicoba" of Bahia after he had visited the region where the latter is native. It was Mr. Dulley who sent to Kew the first material for the study of the Bahia or Jeque "manicoba," now recognized as different from the *Manihot Glaziovii* or Ceara "manicoba."

Increased amounts of rubber from Bahia are arriving at New York, the increase being namely in "manicoba." Only a small amount of this rubber is the product of plantations, though Jeque rubber is generally spoken of here and in Europe as "plantation" rubber.

The Brazilian Rubber Plantation and Development Co., in which New York capital is interested, have a plantation of *Manihot Glaziovii* in Ceara, regarding which they inform THE INDIA RUBBER WORLD: "We receive manicoba of this latter description from our own plantation from time to time, the quality of which we expect will be very materially increased in a short while, as we now have over 600,000 trees planted and employ over 200 hands on our property, the development of which is progressing very rapidly and to our entire satisfaction."

THE largest automobile storage warehouse in the country is a garage on Broadway, New York, in which there were housed recently, for 236 regular customers, cars of the estimated value of nearly \$1,500,000, figured at less than first cost. The house has 150 employes.

FAME FOR A RUBBER WORKER.—An Akron newspaper says: "John Cary, foreman in a department of The B. F. Goodrich Co., has achieved a large measure of fame in this city recently by the publication of a song which he composed entitled 'Where the Old Cuyahoga Winds Around the Bend.'"

NEW HODGMAN SPECIALTIES.

It is not always that illustrations of rubber surface clothing give a fair idea of either the value or finish of the garments. The picture of the V neck auto shirt shown here, however, is fairly descriptive. The coat, which is an original design just brought out by the Hodgman Rubber Co. (New York), and for which a patent has been applied, is of the shirt type without buttons or fastening of any sort, the neck and collar being made of a series of gussets filled with thin elastic rubber, so that the collar may easily be stretched, allowing the garment to be put on over the head. The sleeves also have the same type of

gussets. The garment is made of very light weight fabrics and in two colors—black and a dark rich red—the rubber surface being upon the outside. The red coat, by the way, has the collar and cuffs finished in black rubber, the whole effect being very elegant. The coat is windproof and rain-proof, and is so light in weight and the finish of the coat is so good, that any objection to a rubber surface garment that the most finical may have disappears at sight. These garments in black retail at \$10 and in red at \$12.50.

The Hodgman specialties in waterproof clothing include a line of silk goods both for automobile and street



HODGMAN "V" NECK AUTO SHIRT.

wear. No doubt many have seen these goods without having entered the Hodgman stores, as they appear in the warerooms of the great cloak houses and are often described as "imported garments." In making up these garments, the patterns, which are exclusively Hodgman designs, are made to closely follow the cloak fashions of the best houses here and abroad. The silk goods are what are known as "confined" fabrics; that is, the Hodgman company have them exclusively, and the manager of their silk coat department revises and changes these designs every month, alternating and combining checks, stripes, changeable silks, and using whatever the taste of the best dressed may demand at that particular time. All of the garments are finished with a delicate coating of transparent Pará rubber on the inside of the garment, and all seams are cemented. An idea of the type of garments made may be had when one remembers that retail prices range from \$15 to \$60 a garment.

WANTS AND INQUIRIES.

- [143] WANTED names of manufacturers of wooden hose reels for garden hose.
- [144] From a rubber manufacturer in New Jersey comes an inquiry regarding where to buy olear gum.
- [145] "Where are regular hose armoring machines built?"
- [146] Wanted information about gum tragacanth—if it has another name, and where it can be procured.

THE NEW "SKIPPER" OVERSHOE.

LOW cut rubber shoes, in fact very low cut, so much so that they are practically sole and heel protectors, are exactly what a great many people want. For city wear, particularly, if the sole and heel are protected, that is all that is necessary. An overshoe, however, that does not come over the upper of



"SKIPPER" OVERSHOE.

the leather shoe is difficult to keep on, and there have been many types all shaped toward this end. Without having worn it—as it is only just on the market—one patent-

ed lately by Frederic C. Hood, of the Hood Rubber Co. (Boston), looks very much as if it had solved the problem. As will be seen from the illustration, a reinforcing strip of frictioned fabric with its upper edge folded upon itself is vulcanized to the upper edge of the shoe, on the inside, forming a bead under which the sole of the leather shoe naturally and easily slips. The bead is entirely out of sight and its only office is to hold the shoe on in whatever position the foot may be. The shoe, by the way, is called the "Skipper," and is manufactured under United States patent No. 867,882, issued October 8, 1907. It is manufactured by the Hood Rubber Co.

CANADIAN TRADE NEWS NOTES.

THE business formerly known as the Vancouver branch of the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, has recently been incorporated under the name of the Vancouver Rubber Co., Limited. A. G. McKenney is general manager and the location is No. 160 Hastings street, West, Vancouver, British Columbia. The company are selling agents for the Gutta Percha company.

The Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, as an evidence of interest in the health of their employees, have arranged to supply the latter with mineral water from a series of sanitary coolers throughout the works.

The rubber footwear factories in Canada have been kept busy all season and still have large orders on hand. The unusually fine fall weather was not conducive to sales by retailers, though the general outlook is promising for a good winter trade. The sale of heavy goods is expected to be large in the regions lately opened up in the west and north.

The Aluminum Flake Co. (Akron, Ohio) announce that Mr. A. J. MacLaren will handle aluminum flake for the rubber trade throughout Canada.

The largest asbestos mine in Canada, it is said, is owned by H. W. Johns-Manville Co., of New York.

INSULATED WIRE IN CANADA.

THE display made by The Wire and Cable Co. of Montreal, at the recent first annual Electrical Show in that city, attracted much attention. Their booth contained exhibits of insulated wire of almost every description, all attractively arranged. Rubber insulated wires fill an important place among their products, and a display of crude rubber was an interesting feature in their space.

CANADIAN MANUFACTURERS IN SESSION.

At the thirty-sixth annual convention of the Canadian Manufacturers' Association, held recently at Toronto, the rubber industry was well represented. At the election of officers, D. Lorne McGilbon, president of the Canadian Consolidated Rubber Co., Limited, was placed on the list of vice-presidents. The executive council of the association includes John J. McGill, of the Durham Rubber Co., Limited, and Robert J. Younge, of the Canadian Rubber Co. of Montreal, Limited.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE condition of the local rubber goods trade is thus summed up by L. L. Torrey, president of the Pennsylvania Rubber Co. of California: "We hear a good deal about politics, the tightness of the money market, dull times, etc., and I guess there are more people standing around talking politics now than there are attending to business. Buyers won't do anything until after the election, and if the election goes the wrong way they won't then. They don't have to spend their money in San Francisco and if the labor unions get in control again things are going to drag here for a while. The labor unions believe that they can drive the business men to keep up big business enterprises and spend their money as the unions would like, but they cannot do it. They are having a dose now of what their attempts lead to—stagnation on account of the strikes, and little work for workmen. Conditions are ripe in this city for a remarkably good business and it is to be hoped that the power of the unions will not be exerted to hold back about two thirds of the spending money during the next two years."

The municipal election will take place in November. The temporary mayor, Taylor, has gained the confidence of eastern people who have business interests here, and as this city now depends on eastern capital and credit for its rapid progress, since its destruction by fire, the merchants are working hard to secure his election.

The Pennsylvania Rubber Co. of California has been incorporated, with L. L. Torrey president and manager and L. D. Torrey, secretary and treasurer. It has been formed for the purpose of adequately handling the market products of the manufacturers in Pennsylvania of the same name. Mr. Torrey reports that they have been meeting with a very favorable business. Mr. Grant, with the firm, is now on a trip to Seattle.

R. H. Pease, of the Goodyear Rubber Co., states that the rubber houses have been making good shipments all over the coast of rubber boots and shoes and are now waiting the rains for their customers to use their goods up.

The new building of the Pacific Coast Rubber Co. is practically completed, and as soon as the finishing work is completed—say about the first of December—will be occupied. Mr. Bushnell reports that business has been very good during the entire summer.

W. T. Barton, president of Barton, Squires, Byrne Co., is now in the eastern States visiting the various factories and buying equipment for the plant. He has purchased some new flax machinery for braiding flax, which will be the first of this kind of machinery to come to the coast. This company has taken the agency for the Federal Waterproofing Co., of St. Joseph, Mo.

Ed. Rumsey, vice president of the J. W. Byrnes Belting and Hose Co., of St. Louis, is visiting the trade in San Francisco.

Mr. Blanchard, manager of the Mechanical Rubber Co., of Chicago, has been in this city placing orders with the trade.

The Bowers Rubber Works have moved to their permanent building on Sacramento street, near the water front. They report a remarkably good business throughout the coast territory.

Mr. Duffington, representing the Trenton Rubber Manufacturing Co., is in town and making the rounds of his friends in the trade.

Hughson & Merton, at No. 436 Market street, have given up the agency and account of the International Rubber Co., although, since the agency does not expire until January 1, they will continue to look after the lines until the company sends out a new agent. Hughson & Merton have taken on the agency for the Ajax-Grieb Rubber Co.'s tires.

The Gorham Rubber Co. is preparing to move over the main offices to the new building in San Francisco, but will continue the Oakland store hereafter as a branch.

Mr. Gurr, representing the W. D. Allen Manufacturing Co.,

of Chicago, has notified the local houses that he will be in this city within a short time.

The Diamond Rubber Co. is looking about for a new and permanent location in San Francisco, with a view to bringing the main plant over from Oakland, and having the principal headquarters here in San Francisco, as previous to the fire.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

ISAAC FRIEDMAN, general manager of the Stein Double Cushion Tire Co., of this city, was stricken with apoplexy aboard a train between Akron and Cleveland, on October 17, and died in a hospital in the latter city soon afterward. Mr. Friedman spent the day at the offices in Akron, as was his custom, and then started for his home in Cleveland to spend the night. He had just returned from a trip to Europe for his health, and upon his return was supposed to be in the best of health. Mr. Friedman was wealthy and a well known figure in rubber circles.

At the annual meeting of The Diamond Rubber Co. all of the directors and officers of the concern were reelected. The officers are: F. A. Hardy, president; A. H. Marks, vice-president and superintendent; W. B. Miller, secretary; A. H. Noah, treasurer. The other directors are: R. G. Lake, of Chicago, and O. C. Barber and E. K. Hardy, of Akron.

Fred Work, brother of B. G. Work, president of The B. F. Goodrich Co., with Chester Maxson, has returned home after a trip across the continent and back in a 40 H.P. Oldsmobile touring car, covering about 11,000 miles. The car was equipped with Goodrich tires, which are said to have stood the rough usage in splendid style. The Oldsmobile company have purchased the car and started upon a 1,000 mile non-stop endurance test, with the idea of sending it then to the New York automobile shows.

By the first of the year The B. F. Goodrich Co. will have increased the number of their employes to about 500 more than were on the payroll a year ago. As soon as the new concrete six-story factory building is completed, at least 300 more men will be needed. The employment department is finding some difficulty in securing enough men and girls.

Employment is to be furnished for 200 more men by December 1 at The Diamond Rubber Co.'s works. The mammoth factory building now under construction is practically finished. As soon as they can be secured, 150 tiremakers will be added to the present force at the Diamond. Four hundred men have been added to the number of employes in the past year.

All of the other rubber manufacturing companies in Akron are experiencing similar prosperity, and it is expected that there will be a 15 per cent. increase in the population of this city this year solely through the growing demand for employes by these concerns.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of August, 1907, and for the first eight months of five calendar years:

MONTHS.	Belting Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
August, 1907.....	\$124,750	\$214,365	\$349,007	\$689,022
January to July.....	795,905	604,075	2,352,870	3,842,910
Total	\$920,715	\$808,440	\$2,702,777	\$4,531,932
Total, 1906.....	800,245	788,066	2,094,008	3,683,309
Total, 1905.....	755,988	767,775	1,918,481	3,442,244
Total, 1904.....	570,072	651,392	1,600,574	2,822,938
Total, 1903.....	568,707	507,897	1,655,396	2,732,090

News of the American Rubber Trade.

UNITED STATES RUBBER CO.—DIVIDENDS.

THE board of directors of the United States Rubber Co., on October 3, declared the regular quarterly dividend of 2 per cent. on the first preferred capital stock, and the regular quarterly dividend of 1½ per cent. on the second preferred stock, from the net earnings for the fiscal year beginning April 1, 1907, payable on October 31. In connection with the announcement of these dividends it was stated at the offices of the company that the net earnings for the first six months of the business year, with September partially estimated, were \$2,175,000, including dividends amounting to \$277,812.50 received upon the stock of the Rubber Goods Manufacturing Co. in the United States company's treasury.

DEVELOPMENT AT BRISTOL.

THE large new building for the insulated wire department of the National India Rubber Co. (Bristol, Rhode Island), referred to at some length in THE INDIA RUBBER WORLD May 1, 1907 (page 256), is practically completed and the installation of machinery is in progress, with the idea of having it in working order by New Year. The rubber clothing department, in operation since the company was started, in 1865, has been discontinued, in order to make room for the greater development of the insulated wire branch. No mackintoshes have been made by the company for four or five years past.

ENLARGING A RUBBER RECLAIMING PLANT.

THE Boston Woven Hose and Rubber Co. have found it necessary to add to their facilities at Plymouth, Massachusetts, for producing reclaimed rubber. Work has been started on a three-story brick building, 109 x 109 feet, and an engine room and boiler house, all directly connected with the present buildings. It is understood that the contractor is to have the work completed by the middle of January next. Several parcels of land have been acquired for building and storage space, and for a number of houses to be occupied by the company's employés.

FORCED TO BUILD BY GROWING BUSINESS.

THE Bristol Co. (Waterbury, Connecticut) are about to erect another addition to their plant 53 x 170 feet, three stories high. This additional space is made necessary by the increased demand for Bristol's recording thermometers and Bristol's patent steel belt lacing. With the amount of business already in sight the company feel that it will not be long before even this addition will be crowded.

SPOT-PROOFING OF FABRICS.

PLYMOUTH Rubber Co. (Stoughton, Massachusetts), proofers for the trade, announce that they have installed and are operating successfully a new method for spot-proofing silks, satins, and the like. They are in a position, therefore, to supply the cutting trade with silks that are rubberized as well as spot-proofed, thus contributing to the material excellent waterproof qualities. The new treatment may be applied to fabrics before or after they have been rubber-coated. Plymouth Rubber Co. are now headquarters for work in this new line.

AN ALLING STORE IN NEW JERSEY.

THE chain of Alling rubber stores, starting in Connecticut, has now extended to New Jersey. The Alling Rubber Co., of Paterson, having been incorporated, with \$10,000 capital, to deal in rubber goods at wholesale and retail, and also bicycles and sundries and sporting goods. Clarence E. Alling, who is connected with the Alling syndicate's store at Stamford, is president and treasurer of the new company, and Frederick F. Lockwood secretary. The location is at No. 131 Main street, Paterson, New Jersey.

GUAYULE IN TEXAS.

CONTRACTS are being entered into between the general land office of Texas and the Big Bend Manufacturing Co. for all the guayule shrubs over 6 inches tall that may be found upon the unsold public school lands in the state, that company having been the highest bidder for such guayule. [See THE INDIA RUBBER WORLD, October 1, 1907—page 21.] The price bid was \$01,000. The company have four years in which to remove the guayule. James D. Crenshaw, of San Antonio, is president of the Big Bend Manufacturing Co., incorporated in Delaware August 27, 1907, with \$25,000 capital authorized.

TAXIMETER CABS IN NEW YORK.

THE New York Taxicab Co. on October 1 began their service of motor cabs of the landaulette type, available for use either open or closed, with a seating capacity for four persons inside and one person outside with the driver. Each cab is equipped with a taximeter for the regulation of charges, which are 30 cents for the first half mile or fraction, and 10 cents for each quarter mile thereafter—a marked reduction from prices ordinarily paid for cab service in New York. The company began with about 70 cabs, starting from the principal hotels and clubs, and it is intended to increase the number until several hundred are in use. It is stated that 600 cabs have been contracted for. Based upon the success of the Compagnie Française des Automobiles de Place, of Paris, and several companies in London operating similar systems, it is estimated that the new service will prove popular and profitable, and if so an important new demand for pneumatic tires will be created. The offices of the New York Taxicab Co. are at No. 546 Fifth avenue. Harry N. Allen is president; G. Winthrop Sands, vice-president; Walter C. Allen, secretary, and W. W. Tracy, treasurer. Messrs. Sands, Tracy and H. N. Allen are the directors in New York of the New York Motor Cab Co., Limited, recently registered in London [see THE INDIA RUBBER WORLD August 1, 1907—page 352], which corporation owns and controls the New York Taxicab Co. The taximeters used supplied by Société Générale des Compteurs de Voitures of Paris.

Another New York company has been talked of for entering the same field, by the name of The Touring Car and Taxicab Co., but no details are yet available regarding it.

THE "P. B." DYNAMOMETER.

IN connection with the above-named testing machine for india-rubber and certain other materials, referred to in THE INDIA RUBBER WORLD for September 1 (page 382) as having been bought out by A. D. Cillard fils, of Paris, it was mentioned that a New York address was maintained by the interest. Since the article in question was first written the New York address has been changed. The address now is Nos. 43-45 West Thirty-fourth street, and in writing, letters should be addressed to Mr. Ch. Dien.

WHEN TIRES CAN COME IN FREE.

THE United States treasury department has issued a circular to customs officials, regulating the admission of foreign made automobiles, once imported and paying duty, and afterward taken abroad by the owners for touring purposes. On taking out of the country any such automobile the owner is required to obtain a certificate, to aid in the identification of the car when its entry is again sought. "If the certificate covers a set of foreign tires, it will not be necessary to prove that the tires brought back on the wheels were those taken abroad. - - - Foreign tires taken out on the wheels of automobiles may be brought back free of duty."

NEW GENERAL ELECTRIC PLAN.

It is stated that the General Electric Co. have recently inaugurated a radical revision of their entire system of credits on goods sold which seems likely, when fully worked out, to have the practical effect of a 15 to 20 per cent. increase in working capital, making it possible for the company to do from \$10,000,000 to \$12,000,000 more gross business than at present, without any increase in capitalization.

CHANGE OF FIRM STYLE.

I. I. SHONBERG, having resigned from the partnership of Green & Shonberg, dealers in scrap rubber at Nos. 110-116 Nassau street, New York, this business will be conducted hereafter under the name of Hans L. Green & Co., by Hans L. Green and Harry A. Weisberger. Mr. Green has lately returned from Europe, where he obtained the agencies of important dealers, and in order to manage an increasing business the firm are occupying larger quarters than formerly.

INSPECTION OF ELECTRIC WIRES.

THE Wire Inspection Bureau, some account of the work of which appears elsewhere in this paper, have sent out all over the country requests for samples of electric wires taken from old or put into new installations, with suitable blank forms for filling in certain details descriptive of the samples and their history. The object is to find out how wires made up with different characteristics will stand the test of time.

A NEW HAVEN WIRE PLANT SOLD.

THE wire plant of the National Wire Company, at New Haven, Connecticut—a company placed in the hands of receivers early in the year and later adjudged bankrupt—has been purchased by the American Steel and Wire Co. (Worcester, Massachusetts), a subsidiary company of the United States Steel Corporation. The price mentioned is \$650,000. H. Stuart Hotchkiss (of L. Candee & Co., rubber manufacturers) was one of the receivers and one of the trustees of the estate in bankruptcy. The American Steel and Wire Co. manufacture rubber insulated wire, among other products, at Worcester, but will not make this type of wire at New Haven.

DUTIABLE WASTE RUBBER IMPORTS.

An importation at New York was found to consist of new scrap rubber consisting of pieces of hot-water bottles, tubing, and the like, rejected as waste at the factory. The board of general appraisers upheld the classification of the goods as waste under paragraph 493, tariff act of 1897 ["Waste, not specially provided for in this act, 10 per cent. *ad valorem*"], overruling the importer's contention that it was free of duty under paragraph 579 as refuse rubber fit only for remanufacture.

GRANT TIRE PATENT TO THE SUPREME COURT.

APPLICATION for a writ of *certiorari* has been made to the United States supreme court in the case of The Milwaukee Rubber Works Co. against The Rubber Tire Wheel Co. In the first place, the Rubber Tire Wheel Co., the owner of the Grant solid tire patent (No. 554,675), entered into relations with a combination of tire manufacturers, and in time sued the Milwaukee company on a claim that it had not kept its agreement as to the payment of royalties. There was involved a fund of \$50,000 for the purpose of maintaining the combination. The United States circuit court for the eastern district of Wisconsin dismissed the case on the ground that the agreement was in restraint of trade. [See THE INDIA RUBBER WORLD, March 11, 1906—page 194.] The circuit court of appeals reversed this decision and ordered judgments for the royalties claimed, taking the ground that the \$50,000 fund had never been actually used to kill off competition, no offense had been committed, and besides the trade in patent articles, it held, was exempt from the general prohibition

against combinations in restraint of trade and competition. The Milwaukee company now seek an adjudication of the case by the supreme court.

NEW INCORPORATIONS.

Iowa Auto and Tire Co., September 5, 1907, under the laws of Iowa; capital, \$24,000; to handle automobiles and repair tires, and run a general garage business, at No. 414 Main street, Davenport, Iowa. Theo. Oelkers is president, J. L. Hebert, treasurer, and P. C. Petersen sales manager.

Green Insulation Co., October 4, 1907, under the Ohio laws; capital, \$50,000. Incorporators: D. J. Barry, E. P. Strong, J. E. Chadwick, I. C. McDonald, and G. L. Rebman. Location: Cleveland, Ohio.

Delta Rubber Co., September 4, 1907, under the New Jersey laws; capital, \$100,000. Incorporators: Edward D. Cronin, Brooklyn; Fred Knowlton and Edgar A. Monfort, New York City.

Haverhill Rubber Co., October 1, 1907, under the Massachusetts laws; capital, \$25,000. Incorporators: Erastus E. Dorman, Lawrence, Mass.; Georgia Clark and Isaac Crocker, Providence, Rhode Island.

Home Tire Co., October 2, 1907, under the New Jersey laws; capital, \$25,000. Incorporators: Edward W. Moore, Jr., Harry Klag, Jr., and Charles A. Comp, all of Trenton, N. J.

The Maryland Belting and Packing Co., October 2, 1907, under the Delaware laws; capital, \$100,000. This company, manufacturing special stitched canvas belting and packing, was formerly incorporated under the laws of Maryland, with a smaller capital. George D. Iverson, Jr., is president, Arthur L. Campbell vice president, and Samuel T. Owings secretary-treasurer. Location: Nos. 502-506 South Dallas street, Baltimore.

The Coomber Tire and Rubber Co., October 4, 1907, under the laws of New York; capital, \$25,000. To manufacture packings and tire treads, at Jersey City, New Jersey; New York office, No. 120 Cedar street. James J. Coomber, of New York city, and William H. Caffrey, of Brooklyn, are among the directors.

The Bayne-Subers Tire and Rubber Co., October 5, 1907, under the Ohio laws; capital, \$5000. Incorporators: L. A. Subers (president and manager of The Cosmopolitan Sanatorium Co., Cleveland, Ohio), Dr. E. D. C. Bayne, A. T. Osborn, E. O. Peets, J. E. Taylor, O. N. McClintock, and Z. B. Sawyer.

TRADE NEWS NOTES.

Hopewell Brothers (Cambridge, Massachusetts), manufacturers of the Hopewell tire case described in THE INDIA RUBBER WORLD September 1, 1906 (page 394), announce that they have decided to furnish with each of their cases an inner tube case, in consequence of which they are making an advance in their list prices. In future they will not sell tire cases without this tube case.

Mr. R. G. Howell, who retired lately as manager of the Franklin car department of Wyckoff, Church & Partridge (New York), dealers in automobiles and tires, has had incorporated under the laws of New York state The R. G. Howell Co., with Mr. Howell as president and general manager and J. Z. Baten, treasurer, and headquarters at No. 1657 Broadway. They have secured the agency for The Northern Motor Car Co. (Detroit) for New York and vicinity.

The O'Sullivan Rubber Co. include in their output of rubber heels the principal fashionable shapes in ladies' wear—something that not all the houses in the trade do. Their small "Cuban" heels, with flaring wings, are referred to as smaller than any other rubber heels in the market.

Mr. W. N. Shelton, manager of the cravenette, mackintosh, and surface clothing department of the Hodgman Rubber Co. (New York), left for the West on October 15, for an extended tour among the Hodgman jobbers.

TIRES FOR THE CARRIAGE TRADE.

The exhibition held in connection with the thirty-fifth annual convention of the Carriage Builders' National Association, in New York, beginning on October 8, was located, as last year, in the St. Nicholas Bldg. There was a goodly number of exhibitors of carriage parts and materials, and their displays were varied, extensive, and attractive. Among the exhibits of carriage accessories were several leading tire firms, the list including:

Consolidated Rubber Tire Co. New York.
The Diamond Rubber Co. Akron.
Firestone Tire and Rubber Co. Akron.
The B. F. Goodrich Co. Akron.
The Goodyear Tire and Rubber Co. Akron.
The Hartford Rubber Works Co. Hartford.
Kokomo Rubber Co. Kokomo.
The Republic Rubber Co. Youngstown.
The Victor Rubber Co. Springfield.

The Victor Rubber Co. also showed a tire applying machine in operation. The Milholland solid and cushion rubber tire, with a new system of fastening, was shown by the Milholland Co. (Dunkirk, New York), and pneumatic tired wire wheels by The Mott Wheel Works (Utica, N. Y.).

The Fairfield Rubber Co. showed a fine line of carriage cloths and imitation leather. The L. C. Chase Co. had on display an attractive line of rubber ducks and drills and auto fabrics. The Fabrikoid Co. were also represented. Rubberset Brush Co. (Newark, New Jersey) showed their patent brushes with bristles set in hard rubber.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending October 28:

COMMON STOCK.

Week	Sept. 30	Sales	300 shares	High	30	Low	27 ¹ / ₈
Week	Oct. 7	Sales	2400 shares	High	27	Low	26 ¹ / ₂
Week	Oct. 14	Sales	1720 shares	High	27 ¹ / ₂	Low	22 ¹ / ₂
Week	Oct. 21	Sales	3450 shares	High	22 ³ / ₄	Low	17
Week	Oct. 28	Sales	3700 shares	High	20 ¹ / ₂	Low	16

For the year—High, 52¹/₂; Feb. 10; low, 16, Oct. 25.

Last year—High, 30¹/₂; low, 38.

FIRST PREFERRED STOCK.

Week	Sept. 30	Sales	810 shares	High	92 ¹ / ₄	Low	80 ³ / ₄
Week	Oct. 7	Sales	3380 shares	High	92 ¹ / ₈ <td>Low</td> <td>88</td>	Low	88
Week	Oct. 14	Sales	1885 shares	High	88 <td>Low</td> <td>84¹/₄ </td>	Low	84 ¹ / ₄
Week	Oct. 21	Sales	5085 shares	High	84 <td>Low</td> <td>75</td>	Low	75
Week	Oct. 28	Sales	4589 shares	High	79 <td>Low</td> <td>68</td>	Low	68

For the year—High, 109⁷/₈; Jan. 7; low, 68, Oct. 25.

Last year—High, 115¹/₂; low, 104³/₄.

SECOND PREFERRED STOCK.

Week	Sept. 30	Sales	200 shares	High	61 ³ / ₄	Low	61 ¹ / ₂
Week	Oct. 7	Sales <td>300 shares <td>High <td>60 <td>Low <td>60</td> </td></td></td></td>	300 shares <td>High <td>60 <td>Low <td>60</td> </td></td></td>	High <td>60 <td>Low <td>60</td> </td></td>	60 <td>Low <td>60</td> </td>	Low <td>60</td>	60
Week	Oct. 14	Sales <td>700 shares <td>High <td>57 <td>Low <td>53</td> </td></td></td></td>	700 shares <td>High <td>57 <td>Low <td>53</td> </td></td></td>	High <td>57 <td>Low <td>53</td> </td></td>	57 <td>Low <td>53</td> </td>	Low <td>53</td>	53
Week	Oct. 21	Sales <td>700 shares <td>High <td>55 <td>Low <td>48¹/₂ </td></td></td></td></td>	700 shares <td>High <td>55 <td>Low <td>48¹/₂ </td></td></td></td>	High <td>55 <td>Low <td>48¹/₂ </td></td></td>	55 <td>Low <td>48¹/₂ </td></td>	Low <td>48¹/₂ </td>	48 ¹ / ₂
Week	Oct. 28	Sales <td>510 shares <td>High <td>50 <td>Low <td>40</td> </td></td></td></td>	510 shares <td>High <td>50 <td>Low <td>40</td> </td></td></td>	High <td>50 <td>Low <td>40</td> </td></td>	50 <td>Low <td>40</td> </td>	Low <td>40</td>	40

For the year—High, 78¹/₈; Jan. 7; low, 40, Oct. 26.

Last year—High, 87¹/₂; low, 75.

The market for securities of every class has been depressed for some weeks past, without regard to the condition of the companies affected, due to reasons of financial stringency which now promise to be of a temporary character.

POPE MANUFACTURING CO.

GEORGE A. YULE, of Kenosha, Wisconsin, has been appointed co-receiver of the Pope Manufacturing Co., to act with Albert L. Pope, whose appointment was reported lately in this journal. The work of the receivership will be so divided as to render Mr. Pope's presence in the West necessary less frequently than before. The Pope Manufacturing Co.'s plant at Westfield, where nearly 400 men were employed, with a weekly payroll of about \$6,000, has been closed. Negotiations are understood to be in progress for the sale of the company's Pope-Toledo factory. The National Association of Automobile Manufacturers has declined to accept the resignation of Albert L. Pope as president.

VISITORS FROM PARA.

THE steamer *Acre*, one of the three new boats lately put in commission by the Lloyd Brasileiro for service between Rio de

Janeiro and New York, on her first trip north, carried a party of tourists from Pará and other Brazilian ports, who spent ten days in sightseeing in New York, Boston, Philadelphia and Washington and visited Niagara Falls.

OBITUARY NOTES.

TRENOR L. PARK, senior partner in the New York and Boston cotton duck commission house of Catlin & Co., died on October 23, in his forty-eighth year, following a surgical operation. He was the son of Trenor W. Park, a Vermont lawyer, was graduated from Harvard, and entered the Catlin firm in 1883. THE INDIA RUBBER WORLD is advised that the new Catlin co-partnership recently entered into will not be affected by the decease of Mr. Park.

Bulletin No. 60 of the Meriden Rubber Planting Corporation, issued from Tula de los Tuxtlas, Mexico, records the death, on August 28, of Mrs. Lanette Miller Foster, the wife of Mr. J. Herbert Foster, lately of Meriden, Connecticut, the founder of the company and its manager in Mexico. She had cooperated enthusiastically with her husband in the carrying out of his plans in Mexico and contributed in an important degree to the building up of an enjoyable social circle in their new locality, besides which she was an authoress of no little note.

TRADE NEWS NOTES.

A FIRE occurred on October 2 at the plant of The Rosendale-Reddaway Belting and Hose Co., Limited (Newark, New Jersey). The amount of the damage is not reported, but the insurance on the buildings and stock affected amounted to \$28,300.

Jinrikisha wire wheels for export, with English pattern clincher or cushion rims, and 1³/₄ or 1¹/₂ inch solid rubber or rubber cushion tires, are a specialty of The Mott Wheel Works (Utica, New York). They supply also rubber tired wheels for victorias, dog carts, and sulkies.

The Peerless Rubber Manufacturing Co. (New York) were represented at the exhibition in connection with the convention of the American Street and Interurban Railway Manufacturers' Association, at Atlantic City, New Jersey, during the past month, by a display of their "Rainbow" packing, and also selections from their stock of hose, packing, step treads, and so on.

Charles H. Oakley, formerly of the Ajax-Grieb Rubber Co., is now with the Combination Rubber Manufacturing Co., of Bloomfield, New Jersey, as is also Charles McCoy, formerly of the Standard Rubber Co., of Trenton.

The Barrett Manufacturing Co., of Philadelphia, have moved their offices from the Land Title building to their factory.

Philip McGrory, of Trenton, has about completed the dismantling of the South street plant of the Philadelphia Rubber Works, abandoned by the latter since the completion of their new plant.

A train out from Utica, New York, for the Adirondacks, on October 27, was wrecked by the breaking of a truck, injuring several passengers. Among them was Leonard F. Requa, formerly of the Safety Insulated Wire and Cable Co. (New York), and Mrs. Requa, the latter having been hurt more seriously than anyone else on the train.

The Tehuantepec Rubber Culture Co. (New York) announce to their subscribers that the suspension of payment by the Knickerbocker Trust Co. (New York), which the company believe to be only temporary, will in no wise embarrass the company's interests. The rubber company recently invested in New York City bonds that portion of their funds not required for immediate operations, reducing their deposit with the Knickerbocker Trust to a small figure.

The registered style of a tire patent infringement suit mentioned in THE INDIA RUBBER WORLD October 1 (page 23) was originally The G. & J. Tire Co. vs. United States Agency, Michelin Tire Co. On March 6, 1905, a petition was filed making the Michelin Tire American Agency a party defendant. The case has not been argued yet, counsel being engaged still in taking testimony.

TRADE NEWS NOTES.

THE St. Louis Rubber Cement Co. have opened a Boston office, at No. 161 Summer street, in charge of William O. Hadley, and it is announced that the company will establish stores at Haverhill, Lynn, and Brockton, Massachusetts, for the more convenient supply of the St. Louis cements to the New England trade.

The Peerless Rubber Manufacturing Co. (New York) have added to their list of agencies one at No. 37 Hopkins place, Baltimore, Maryland.

Frank C. Riggs has resigned as vice-president of The Fisk Rubber Co. to become affiliated with the Packard Motor Car Co., in charge of their commercial vehicle department.

J. E. Ham, who has long been connected with the insulated wire trade, being latterly with the Hazard Manufacturing Co. (Wilkesbarre, Pennsylvania), has been appointed Western representative of the Waterbury Co. (New York), for the introduction of their insulated wires, and will have charge of the Waterbury branch at No. 108 La Salle street, Chicago.

Stanley Supply Co. (Dr. S. Stanley Jacobs, proprietor), No. 38 East Twenty-first street, New York, are surgical rubber specialists, supplying everything in rubber for hospital use. They have supplied many hospitals throughout the country, including those under control of the department of charities of New York city. Among their specialties are surgeons' operating gloves and the "Solo" pure rubber bottle cap.

Boston Woven Hose and Rubber Co. are making a specialty of fruit jar rings in handy packages, which renders the trade in these articles more convenient than when the rings were shipped in bulk.

Joseph Bondy's Sons (No. 17 Liberty street, New York) advise THE INDIA RUBBER WORLD that they are prepared to supply viscose, about which a correspondent inquired in a recent issue.

Receivers have been appointed for the Westinghouse Electric and Manufacturing Co. (Pittsburgh) and affiliated corporations, on the application of H. H. Westinghouse, a stockholder. The reason given is that the company found it impossible to secure ready money for all the large contracts it has on hand, but no doubt is expressed that the company will be able to continue in business.

L. T. Vance has become connected with the Sweet Tire and Rubber Co. (Batavia, New York).

Dermot McEvoy has been appointed general manager of the Derby Rubber Co., rubber reclaimers, at Derby and Shelton, Connecticut. He is a mechanical engineer by profession, whose work has brought him into close contact with the rubber industry.

James C. Matlack, for some years with the International Automobile and Vehicle Tire Co., has been elected vice president and general manager of The Michelin Tire Co., who have acquired the International plant at Milltown, New Jersey, and added to it largely.

A copartnership has been formed to continue the business and firm of Catlin & Co. in the cotton duck trade, in New York, by Lowell Lincoln, Trenor L. Park, Charles E. Sampson, S. S. Widger and Arthur J. Cumnock, until January 1, 1911.

The United States consul at Colon, Panama, in writing officially to Washington, expresses a desire for catalogues of rubber goods.

The 1908 specifications for Reo automobiles, all models, call for Michelin pneumatic tires, with Goodyear detachable rims.

Anderson G. Wilson, a member of the firm of J. M. Ceballos & Co., bankers and brokers, of New York—which firm made an assignment in October, 1906, on account, as alleged, of the failure of a Cuban correspondent—on September 4 filed a petition in the United States district court at Trenton, New Jersey, to have the firm declared bankrupt, with liabilities of \$3,609,800.47. Counsel for the firm have until October 5 to file an answer. Messrs. Ceballos & Co., as general merchants, were at times consignees for rubber to an important extent.

Goodall Rubber Co., Inc., formerly at No. 153 North Fourth street, Philadelphia, removed during the past month to No. 704 Arch street, where they have greater floor space and better facilities generally for handling mechanical rubber goods. The firm make a specialty of railroad and contractors' wants.

The Boston Belting Co., manufacturers of mechanical rubber goods of all kinds, are sending to their friends in the trade one of "King's Booklets," containing good views of the work in progress in constructing the Panama canal, and Panama views generally.

PERSONAL MENTION.

MONSIEUR EMILE ALCAN, of the crude rubber firm Hecht Frères et Cie, of Paris, is visiting the United States, intending to sail for home about the 7th of this month.

The friends of Mr. William M. Ivins, the New York lawyer, are beginning to regard him as the probable choice of his party for governor of New York state next year, on account of the interest taken in him by the public as the central figure in the investigation into transportation affairs in New York city. It will be recalled that Mr. Hughes, the present governor, first won the general attention in somewhat similar work in connection with probing the insurance company scandals.

Mr. George M. Allerton, general manager of the Seamless Rubber Co. (New Haven, Connecticut), who for some three months has been slowly recovering from a severe attack of typhoid fever, is practically well again and back at his desk.

Mr. Charles Howard Norton, advertising manager for George Borgfeldt & Co., and Miss Adele Eddy Black were married in New York on October 16, and started for Canada for their wedding journey. A handsome wedding present was sent by the members of the Borgfeldt firm.

Charles H. Dale, president of the Rubber Goods Manufacturing Co., in addition to serving as an officer or director of most of the subsidiary concerns of that company, is on the board of three New York banks—the Merchants' Exchange, the Irving National, and the Century.

A recent visitor to New York was described as Prince d'Abro Pazratido, of Egypt, whose family are wealthy and powerful in that country, and largely interested in cotton culture. The prince planned to visit the cotton growing region of the United States for the purpose of studying conditions there.

Mr. R. Hale Smith, of The R. H. Smith Manufacturing Co. (Springfield, Massachusetts), an important rubber stamp concern, is reported to have narrowly escaped asphyxiation while experimenting in the laboratory of the company's works on October 23, a gas heating apparatus being in use.

Colonel Samuel P. Colt, president of the United States Rubber Co., whose illness has been referred to in these columns lately, was improving at last accounts and hoped soon to be in his office again.

THE LATEST RUBBER SUBSTITUTE.

HARRY B. COX, a chemist of No. 77 Sigourney street, Hartford, Connecticut, has developed what he terms a substitute for india-rubber and has named it "Halcox." This is referred to as capable of being compounded as readily as natural rubber, and of being vulcanized with even greater facility. Mr. Cox says that it has the advantage over rubber that it may be produced in any required consistency—liquid, plastic, or stiffer if required—and that it can be held in a state as liquid as water, but nothing will be evaporated or lost as is the case where rubber is reduced to a liquid form by the use of naphtha. Mr. Cox informs THE INDIA RUBBER WORLD: "The product will soon be a regular market commodity, manufactured and backed by a prominent rubber company."

FOR the rubber factory—Pearson's "Crude Rubber and Compounding Ingredients."

Review of the Crude Rubber Market

THE rubber market continues depressed, and quotations are even lower than a month ago. Buying at New York has been far from active, and for many grades only nominal quotations can be given. It is believed that the leading consumers have rubber due them on contracts for some months ahead, so that no decline in current prices serves to stimulate buying on a liberal scale. The quotations presented at this time require a word of explanation regarding the relative prices for Africans and Pará grades. Business is actually being done in the latter at the prices quoted, and at a profit to the importers, it is asserted. As for Africans, the quantity handled is smaller and the demand more fitful, and each transaction is subject to special terms. But the manufacturer who demands a special grade of Africans must be prepared to pay liberally for it. It is not to be understood that an important quantity of Africans is being sold at higher prices than for Pará's, but certain grades of the former are now being held at even higher figures than in the quotation list that follows.

The regular Antwerp sale occurred on October 17, when 256 tons were offered and 183 tons found buyers. Messrs. C. Schmid & Co. advise THE INDIA RUBBER WORLD: "Prices show on an average a decline of about 35 centimes per 100 kilos, or about 4 per cent. on values paid in September. As Pará sorts declined meanwhile about 10 per cent., this result may be considered as relatively satisfactory." The next sale will take place November 13; the quantity will be about 450 tons.

Pará arrivals for the month, up to and including the 27th, were 2525 tons, of which 235 tons caucho, against 2590 tons for the same dates last year.

Following are the prices at New York for Pará grades, one year ago, one month ago, and October 30—the current date:

PARÁ.	Nov. 1, '06.	Oct. 1, '07.	Oct. 30.
Islands, fine, new.....	110@120	99@100	91@ 92
Islands, fine, old.....	none here	none here	—@ —
Upriver, fine, new.....	124@125	106@107	99@100
Upriver, fine, old.....	128@129	110@112	105@106
Islands, coarse, new.....	72@ 73	59@ 60	50@ 57
Islands, coarse, old.....	none here	none here	—@ —
Upriver, coarse, new.....	90@ 97	88@ 89	84@ 85
Upriver, coarse, old.....	none here	none here	—@ —
Caucho (Peruvian) sheet.....	77@ 78	69@ 70	62@ 63
Caucho (Peruvian) ball.....	95@ 96	85@ 86	80@ 81
Ceylon (Plantation) fine sheet	139@140	129@130	113@114

AFRICAN.

Sierra Leone, 1st quality.....	94@ 95	Lopori ball, prime.....	101@102
Masai, red.....	94@ 95	Lopori strip, prime.....	95@ 96
Benguella.....	65@ 66	Madagascar, pinky.....	82@ 83
Acera flake.....	18@ 19	Ikelemba.....	102@103
Cameroon ball.....	71@ 72	Soudan niggers.....	83@ 90

CENTRALS.

Esmeralda, sausage....	82@ 83	Mexican, scrap.....	82@ 83
Guayaquil, strip.....	68@ 69	Mexican, slab.....	60@ 61
Nicaragua, scrap.....	81@ 82	Mangabeira, sheet.....	56@ 57
Panama, slab.....	62@ 63	Guayule.....	49@ —

EAST INDIAN.

Assam.....	90@ 91	Borneo.....	36@ 37
Late Pará cables quote:			
Per Kilo.		Per Kilo.	
Islands, fine.....	4\$125	Upriver, fine.....	5\$425
Islands, coarse.....	2\$350	Upriver, coarse.....	4\$300
Latest Maniós advice:		Exchange.....	15 1/2-32 d.
Upriver, fine.....	5\$450		
Upriver, coarse.....	3\$450		

NEW YORK PRICES FOR SEPTEMBER (New Rubber).

	1907.	1906.	1905.
Upriver, fine.....	1.06@1.10	1.22@1.24	1.29@1.32
Upriver, coarse.....	.88@ .90	.92@ .94	.91@ .94
Islands, fine.....	.99@1.05	1.18@1.20	1.26@1.29

Statistics of Para (Excluding Caucho.)

	NEW YORK.		Total.	Total.	Total.
	Fine and Medium.	Coarse.	1907.	1906.	1905.
Stocks, August 31.....Tons	105	75	240	147	417
Arrivals, September.....	387	206	593	723	445
Aggregating.....	552	281	833	870	862
Deliveries, September.....	428	232	660	777	546
Stocks, September 30.....	124	49	173	93	316
	PARÁ.		ENGLAND.		
	Fine and Medium.	Coarse.	1907.	1906.	1905.
Stocks, August 31.....Tons	290	370	625	790	390
Arrivals, September.....	2330	1505	1230	400	690
Aggregating.....	2520	1941	1470	1225	1080
Deliveries, September.....	1048	1491	1195	675	700
Stocks, September 30.....	572	450	275	550	700
World's visible supply, September 30.....Tons			2,383	1,876	1,534
Pará receipts, July to September 30.....			4,720	2,865	2,480
Pará receipts, Caucho, same dates.....			610	485	220
Afloat Pará to United States, September 30.....			383	218	87
Afloat Pará to Europe, September 30.....			705	415	476

In regard to the financial situation Albert B. Beers (brokers in crude rubber and commercial paper, No. 68 William street, New York) advises as follows:

"During the early part of October there was a small demand from out-of-town banks for paper at the full rates of 7@8 per cent., but with the acute money conditions during the latter part of the month paper business came to a complete standstill."

IMPORTS FROM PARÁ AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

OCTOBER 3.—By the steamer <i>Obidense</i> , from Maniós and Pará:					
IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	160,500	55,600	58,600	300	284,000
New York Commercial Co....	95,700	15,600	37,500	1,200	150,000
A. T. Morse & Co.....	23,600	6,700	69,300	...	99,600
General Rubber Co.....	42,000	3,400	44,600	2,700	92,700
C. P. dos Santos.....	20,000	10,700	34,300	...	74,000
Hagemeyer & Brunn.....	34,300	...	19,100	...	53,400
Edmund Reeks & Co.....	22,100	3,600	12,600	...	38,300
Neal & Co.....	1,400	300	12,500	...	14,200
Total.....	417,600	95,000	288,500	4,200	806,200

OCTOBER 14.—By the steamer <i>Maranhense</i> , from Maniós and Pará:					
IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co....	120,100	27,900	49,400	2,700	200,100
General Rubber Co.....	107,400	22,500	50,000	17,500	197,400
Poel & Arnold.....	75,800	21,000	61,400	...	158,200
A. T. Morse & Co.....	78,100	10,600	13,200	1,000	102,900
C. P. dos Santos.....	...	...	25,100	...	25,100
Edmund Reeks & Co.....	10,300	2,500	9,200	...	22,000
Czarnikow, McDougal & Co....	10,600	...	...	...	19,600
Total.....	420,300	84,500	209,200	21,200	735,200

OCTOBER 24.—By the steamer <i>Dunstan</i> from Maniós and Pará:					
IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co....	330,000	60,500	84,800	1,700	486,000
Poel & Arnold.....	151,000	31,000	76,800	2,300	260,000
General Rubber Co.....	120,300	13,600	90,500	20,300	253,700
A. T. Morse & Co.....	162,900	7,000	46,500	...	216,400
Edmund Reeks & Co.....	...	...	...	22,300	22,300
Hagemeyer & Brunn.....	10,000	...	5,000	...	15,000
C. P. dos Santos.....	...	...	17,800	...	17,800
Total.....	783,200	113,000	331,300	46,600	1,274,100

[NOTE.—The steamer *Maderense* from Pará due at New York on November 24, with 325 tons of rubber.]

Rubber Scrap Prices.

NEW YORK prices—in cents per pound for carload lots—are practically unchanged. Shoes are a trifle lower:

Old rubber boots and shoes—domestic.....	11 3/4@12
Old rubber boots and shoes—foreign.....	11 1/4@11 1/2
Pneumatic bicycle tires.....	7 1/2@ 7 3/4
Automobile tires.....	9 7/8@10
Solid rubber wagon and carriage tires.....	10 @10 1/4
White trimmed rubber.....	12 1/2@12 3/4
Heavy black rubber.....	5 3/4@ 6
Air brake hose.....	4 3/4@ 5
Fire and large hose.....	3 5/8@ 3 3/4
Garden hose.....	2 1/2@ 2 3/4
Matting.....	1 1/2@ 1 5/8

MASSACHUSETTS CHEMICAL CO.

WALPOLE, MASS., U. S. A.

Operate Walpole Rubber Works, Walpole Varnish Works.

RUBBER MANUFACTURERS CAN SAVE MONEY BY USING OUR

No. 17 RUBBER FLUX No. 48

It permits additional compounding and puts old stocks in a merchantable condition

Our Flux is used extensively by wire manufacturers for slicking and weatherproofing. Write for prices and samples. We are the largest manufacturers of Friction Tapes in the world. If interested write us about Friction Tape and Cloth.



THIS HANDSOME COLORED HANGER, 26 x 17, IS FURNISHED GRATIS WITH ORDERS FOR

GLORIA RUBBER SPONGES

GLORIA

PRUSSIAN RUBBER SPONGES

Carried in Stock for Prompt Delivery

Also full line for import of Hanover Red Rubber Toys, Inflated, Painted and Gray Rubber Balls, etc.

THE HANOVER RUBBER CO., Ltd.

(Hannoversche Gummi-Kamm Co., Act.-Ges.)

Hanover-Limmer, Prussia

GEO. BORGFELDT & CO.

SOLE AGENTS FOR U. S. AND CANADA

48 & 50 W. 4th St., NEW YORK

PARA RUBBER VIA EUROPE.

		POUNDS.
SEPTEMBER 21.—By the <i>Arabic</i> —Liverpool:		
Poel & Arnold (Cauchó).....	55,000	
Poel & Arnold (Fine).....	4,500	59,500
SEPTEMBER 23.—By the <i>President Grant</i> —Hamburg:		
New York Commercial Co. (Fine)	13,000	
Rubber Trading Co. (Fine).....	8,000	21,000
SEPTEMBER 30.—By the <i>Minnehaha</i> —London:		
General Rubber Co. (Coarse)....	7,000	
OCTOBER 2.—By the <i>Carmania</i> —Liverpool:		
New York Commercial Co. (Fine)	13,500	
Robinson & Stiles (Fine).....	11,500	
New York Commercial Co. (Cauchó)	11,500	36,500
OCTOBER 4.—By the <i>Cedric</i> —Liverpool:		
New York Commercial Co. (Fine)	27,000	
OCTOBER 7.—By the <i>Advance</i> —Mellendo:		
New York Commercial Co. (Fine)	22,500	
A. D. Hitch & Co. (Fine).....	3,500	

F. Rosenstein & Co. (Fine).....	3,500	
New York Commercial Co. (Coarse)	3,000	32,500
OCTOBER 8.—By the <i>Lucania</i> —Liverpool:		
New York Commercial Co. (Fine)	17,000	
N. Y. C. Co. (Coarse).....	9,000	
Robinson & Stiles (Fine).....	11,000	
W. L. Gough Co. (Coarse).....	9,000	46,000
OCTOBER 15.—By the <i>Caronia</i> —Liverpool:		
General Rubber Co. (Cauchó)...	75,000	
OCTOBER 16.—By the <i>President Lincoln</i> —Hamburg:		
W. L. Gough Co. (Fine).....	3,000	

OTHER NEW YORK ARRIVALS.

		POUNDS.
SEPTEMBER 21.—By the <i>Finance</i> —Colon:		
L. Johnson & Co.	9,000	
G. Amsinck & Co.	8,000	
Hirzel, Feltman & Co.	6,000	
Piza Nephews Co.	4,000	
Dumarest Bros. Co.	2,500	

Roldan & Van Sickle.....	1,500	
Henry Mann & Co.	1,000	32,000
SEPTEMBER 21.—By the <i>Canning</i> —Bahia:		
General Rubber Co.	20,000	
J. H. Rosback Bros.	13,000	
New York Commercial Co.	8,000	
A. Hirsch & Co.	4,000	45,000
SEPTEMBER 22.—By the <i>Mexico</i> —Pernambuco:		
Harburger & Stack.....	7,000	
Graham, Hinkley Co.	1,000	
E. Steiger & Co.	1,000	
H. Marquardt & Co.	1,000	10,000
SEPTEMBER 23.—By the <i>Altai</i> —Colon:		
Johnson & Co.	7,000	
G. Amsinck & Co.	1,500	
Hirzel, Feltman & Co.	1,000	9,500
SEPTEMBER 24.—By the <i>Goyaz</i> —Pernambuco:		
A. D. Hitch & Co.	4,500	
SEPTEMBER 23.—By the <i>Santiago</i> —Tampico:		
New York Commercial Co.	*8,000	
Ed. Maurer.....	*30,000	
Poel & Arnold.....	*20,000	
Diamond Rubber Co.	*10,000	*138,000

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean. while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.

Guayule has come to stay and is responsible for the drop in fine Para. The largest factories are using it in increasing quantities. If your competitor can undersell you, be sure he is reducing his cost by using Guayule. It will pay you to experiment.



has been on the market for over 18 months and is known to be the best Guayule made as to life, strength, purity and low percentage of resin



is the same high grade Guayule, **clean and dry**, ready for compounding.

No stocks kept on hand to deteriorate, but contracts made for regular monthly shipments as capacity of our five factories will permit.

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

CENTRALS—Continued.

CENTRALS—Continued.

EAST INDIAN.

SEPTEMBER 26.—By the <i>Colon</i> —Colon:	
G. Amsinck & Co.	8,500
Jose Julia & Co.	1,500
Aramburu, Inc.	1,000
D. A. De Lima & Co.	1,000
Meyer Hecht.	1,000
	13,000

SEPTEMBER 28.—By the <i>Monterey</i> —Vera Cruz:	
New York Commercial Co.	2,500
H. Marquardt & Co.	2,000
Graham, Hinkley Co.	1,000
	5,500

OCTOBER 2.—By the <i>Advance</i> —Colon:	
G. Amsinck & Co.	11,500
Hirz, Feltman & Co.	11,000
Roldan & Van Sickle.	2,500
Henry Mann & Co.	2,000
Maldonado & Co.	1,000
	28,000

OCTOBER 2.—By the <i>Munaiño</i> —Colon:	
G. Amsinck & Co.	3,500
Suzarte & Whitney.	2,500
	6,000

OCTOBER 2.—By the <i>Autilla</i> —Tampico:	
New York Commercial Co.	40,000
Ed. Maurer.	30,000
Akron, Ohio.	10,000
	80,000

OCTOBER 2.—By the <i>Prinz Eitel</i> —Greystown:	
G. Amsinck & Co.	3,000
Aramburu, Inc.	1,500
A. R. Senthil's Sons.	1,000
	5,500

OCTOBER 2.—By the <i>El Paso</i> —Galveston:	
Continental-Mexican Rubber Co.	45,000

OCTOBER 2.—By the <i>Siberia</i> —Colombia:	
G. Amsinck & Co.	2,000
American Trading Co.	1,500
D. A. De Lima & Co.	1,000
I. Brandon & Bros.	1,000
Pedro Lopez.	1,000
Kunhardt & Co.	1,000
	7,500

OCTOBER 3.—By the <i>Proteus</i> —New Orleans:	
Eggers & Heimlein.	2,000
W. R. Grace & Co.	1,000
A. T. Morse & Co.	1,000
G. Amsinck & Co.	1,000
Manhattan Rubber Mfg. Co.	1,000
	5,000

OCTOBER 4.—By the <i>Bayamo</i> —Tampico:	
Ed. Maurer.	70,000
New York Commercial Co.	50,000
Poel & Arnold.	25,000
Diamond Rubber Co.	5,000
	176,000

OCTOBER 5.—By the <i>Merida</i> —Frontera:	
Harburger & Stack.	4,500
American Trading Co.	2,500
Strube & Ulzer.	2,000
E. Steiger & Co.	1,500
Theiland Brothers.	1,000
New York Commercial Co.	1,000
E. N. Tibbals & Co.	1,000
	13,500

OCTOBER 5.—By the <i>Thespis</i> —Bahia:	
A. Hirsch & Co.	13,000
New York Commercial Co.	17,000
J. H. Rosshack Bros.	8,500
Poel & Arnold.	8,000
	46,500

OCTOBER 7.—By the <i>Advance</i> —Colon:	
New York Commercial Co.	5,500
Henry Mann & Co.	4,500
G. Amsinck & Co.	3,000
Andreas & Co.	2,000
Diamond Rubber Co.	1,000
	16,000

OCTOBER 8.—By the <i>Lucania</i> —Liverpool:	
Wilson Trading Co.	22,500

OCTOBER 8.—By the <i>Venetia</i> —Colon:	
G. Amsinck & Co.	3,000
Hirz, Feltman & Co.	3,000
West Coast Rubber Co.	2,500
A. M. Capen's Sons.	2,000
Roldan & Van Sickle.	1,500
	12,000

OCTOBER 11.—By the <i>Gunther</i> —Bahia:	
New York Commercial Co.	10,000
General Rubber Co.	5,000
	15,000

OCTOBER 12.—By the <i>Morro Castle</i> —Frontera:	
H. Marquardt & Co.	3,500
Harburger & Stack.	3,000
E. Steiger & Co.	1,000
	7,500

OCTOBER 12.—By the <i>Dunottar Castle</i> —Colon:	
Dumarest Bros. & Co.	4,000
G. Amsinck & Co.	2,000
Pablo, Calvet & Co.	1,500
Hirz, Feltman & Co.	1,000
L. Johnson & Co.	1,000
	9,500

OCTOBER 14.—By the <i>Figalencia</i> —Tampico:	
E. Maurer.	25,000
For Boston.	22,000
	47,500

OCTOBER 16.—By the <i>El Falso</i> —Galveston:	
Continental Mexican Rubber Co.	56,000

OCTOBER 17.—By the <i>Seguin</i> —Colombia:	
G. Amsinck & Co.	2,500
I. Brandon & Bros.	1,000
A. Sante's & Co.	1,000
Kunhardt & Co.	1,000

A. M. Capen's Sons.	1,000
A. Held.	1,000
American Trading Co.	1,000
Leach Harrison & Co.	2,500
	11,000

OCTOBER 18.—By the <i>Merico</i> —Vera Cruz:	
H. Marquardt & Co.	1,500
Graham, Hinkley Co.	1,000
Harburger & Stack.	1,000
	3,500

OCTOBER 18.—By the <i>Camus</i> —New Orleans:	
Manhattan Rubber Co.	1,500
American Trading Co.	1,500
Eggers & Heimlein.	1,000
G. Amsinck & Co.	1,000
	5,000

OCTOBER 21.—By the <i>Santiago</i> —Tampico:	
New York Commercial Co.	65,000
Poel & Arnold.	100,000
	165,000

OCTOBER 23.—By the <i>Colon</i> —Colon:	
Hirz, Feltman & Co.	13,000
L. Johnson & Co.	7,000
Roldan & Van Sickle.	6,000
G. Amsinck & Co.	4,000
Aramburu, Inc.	3,000
Jose Julia & Co.	1,500
Demarest Bros. Co.	1,500
Silva, Brothers Co.	1,000
Kunhardt & Co.	1,000
United Fruit Co.	1,000
Meyer Hecht.	1,000
I. Brandon & Bros.	1,000
	41,000

*This item in connection with imports of Centrals denotes Grade rubber.

AFRICANS.

SEPTEMBER 24.—By the <i>Vaderland</i> —Antwerp:	
A. T. Morse & Co.	27,000

SEPTEMBER 24.—By the <i>Minneapolis</i> —London:	
Robinson & Stiles.	0,000

SEPTEMBER 24.—By the <i>President Grant</i> —Hamburg:	
Poel & Arnold.	68,000
W. L. Gough Co.	5,500
George A. Alden & Co.	1,500
	75,000

SEPTEMBER 28.—By the <i>Peinisdal</i> —Lisbon:	
Poel & Arnold.	22,500
OCTOBER 1.—By the <i>Kronland</i> —Antwerp:	
A. T. Morse & Co.	6,500
W. L. Gough Co.	3,500
	10,000

OCTOBER 2.—By the <i>Armania</i> —Liverpool:	
George A. Alden & Co.	13,500

OCTOBER 8.—By the <i>Zeland</i> —Antwerp:	
A. T. Morse & Co.	100,000
General Rubber Co.	84,000
Poel & Arnold.	90,000
George A. Alden & Co.	70,000
Joseph Cant.	25,000
Robinson & Stiles.	13,500
	301,500

OCTOBER 8.—By the <i>Lucania</i> —Liverpool:	
General Rubber Co.	37,000
A. T. Morse & Co.	22,000
George A. Alden & Co.	17,000
	76,000

OCTOBER 8.—By the <i>La Gascogne</i> —Havre:	
Henry A. Gould Co.	5,000

OCTOBER 10.—By the <i>Teutonic</i> —London:	
Poel & Arnold.	13,500
Livesey & Co.	6,500
	20,000
OCTOBER 11.—By the <i>Patricia</i> —Hamburg:	
Poel & Arnold.	45,000
W. L. Gough Co.	2,500
	47,500

OCTOBER 12.—By the <i>Celtic</i> —Liverpool:	
Poel & Arnold.	11,500

OCTOBER 12.—By the <i>Philadelphia</i> —Bordeaux:	
General Rubber Co.	67,000
Rubber Trading Co.	2,500
	69,500

OCTOBER 12.—By the <i>Amerika</i> —Hamburg:	
George A. Alden & Co.	11,500

OCTOBER 14.—By the <i>Finland</i> —Antwerp:	
A. T. Morse & Co.	7,000

OCTOBER 16.—By the <i>Caronia</i> —Liverpool:	
General Rubber Co.	11,500
Raw Products Co.	5,500
Robinson & Stiles.	3,500
	20,500

OCTOBER 16.—By the <i>President Lincoln</i> —Hamburg:	
George A. Alden & Co.	27,000
A. T. Morse & Co.	11,500
Rubber Trading Co.	2,500
W. L. Gough Co.	3,500
	44,500

OCTOBER 17.—By the <i>Hudson</i> —Havre:	
Poel & Arnold.	145,000
Livesey & Co.	1,500
	146,500

OCTOBER 19.—By the <i>Arabic</i> —Liverpool:	
Poel & Arnold.	62,500

OCTOBER 21.—By the <i>La Bretagne</i> —Havre:	
George A. Alden & Co.	18,000

OCTOBER 4.—By the <i>Minneapolis</i> —London:	
Robinson & Stiles.	0,000
Poel & Arnold.	1,000
	1,000

OCTOBER 5.—By the <i>Roma</i> —Colombia:	
A. T. Morse & Co.	17,500

OCTOBER 5.—By the <i>Gibraltar</i> —Singapore:	
H. Marquardt & Co.	40,000
Pedro Lopez.	13,500
Webster & Schaefer.	11,500
General Rubber Co.	11,500
Joseph Cant.	11,000
W. L. Gough Co.	4,500
	92,000

OCTOBER 14.—By the <i>Minneapolis</i> —London:	
General Rubber Co.	17,000
Robinson & Stiles.	11,500
	28,500

OCTOBER 14.—By the <i>Argonauts</i> —Colombia:	
A. T. Morse & Co.	13,500

OCTOBER 16.—By the <i>Oceanic</i> —London:	
W. L. Gough Co.	27,000

OCTOBER 22.—By the <i>Minneapolis</i> —London:	
General Rubber Co.	7,000

OCTOBER 22.—By the <i>Perona</i> —Singapore:	
Heahler & Co.	34,000
W. L. Gough Co.	37,000
Poel & Arnold.	27,000
George A. Alden & Co.	11,000
A. T. Morse & Co.	11,000
	120,000

OCTOBER 22.—By the <i>Perona</i> —Singapore:	
Heahler & Co.	34,000
W. L. Gough Co.	37,000
Poel & Arnold.	27,000
George A. Alden & Co.	11,000
A. T. Morse & Co.	11,000
	120,000

OCTOBER 22.—By the <i>Perona</i> —Singapore:	
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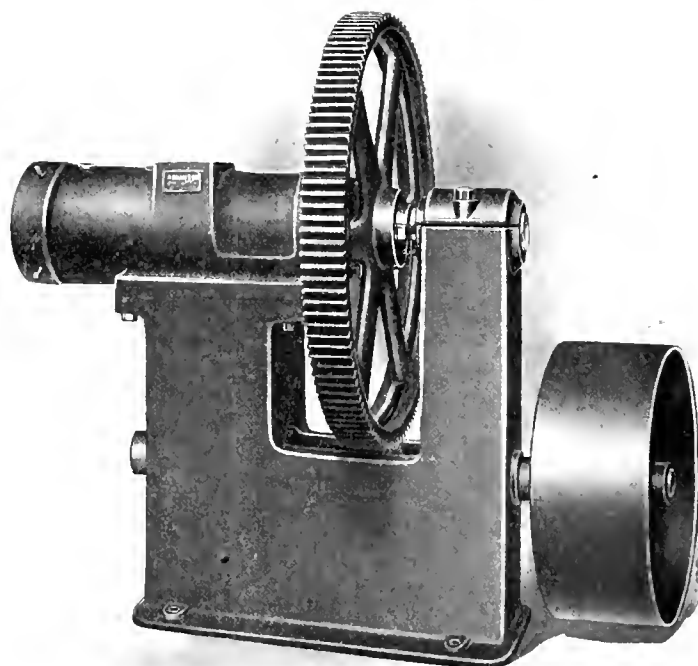
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NEW STYLE TUBING MACHINE.

THE illustration herewith exhibits the most modern machine in its field, having many features that render it economical and otherwise satisfactory in working. It has an outboard bearing which gives the screw a proper balance, and the thrust bearing is made up of a series of cast iron rings of different texture, which run in oil, whereby is secured the proper lubrication so important a feature in tubing machine construction. The bed which carries the outboard bearing and cylinder is cast in one piece, being unusually heavy and strong. The capacity of this

machine, in comparison with others of equal size, is referred to as having been demonstrated by several tests to be as 3 to 1. The drive pinion is of cast steel, cut, and the large gears of cast iron, also cut, which, together with the outboard bearing and the



ADAMSON'S NEW TUBING MACHINE.

special ring thrust, makes the machine smooth and easy running. This machine is manufactured by Alexander Adamson, Akron, Ohio.

OFFICIAL STATISTICS OF RUBBER (IN POUNDS).

UNITED STATES.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1907.....	3,723,608	302,975	3,360,723
January-July.....	46,777,211	2,601,822	44,115,389
Eight months, 1907	50,590,039	3,024,797	47,476,112
Eight months, 1906	42,283,577	2,358,857	39,924,720
Eight months, 1905	44,079,510	2,052,652	42,626,858
GERMANY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1907.....	2,669,129	849,200	2,119,929
January-July.....	21,255,520	7,402,340	13,853,180
Eight months, 1907	24,224,640	8,251,540	15,973,100
Eight months, 1906	25,497,340	7,504,040	17,933,300
Eight months, 1905	29,686,140	10,169,720	19,516,420
FRANCE.*			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1907.....	2,152,040	1,368,180	783,860
January-July.....	20,054,109	12,364,660	7,689,449
Eight months, 1907	22,206,140	13,732,840	8,473,300
Eight months, 1906	21,413,200	11,885,940	9,527,320
Eight months, 1905	18,173,540	10,788,580	7,384,960
GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1907.....	4,690,400	3,343,984	1,256,416
January-July.....	48,110,068	24,430,500	23,680,048
Eight months, 1907	52,711,068	27,774,544	24,936,464
Eight months, 1906	43,684,368	23,706,192	19,888,176
Eight months, 1905	42,288,060	23,112,440	19,176,520

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 41 Lincoln Street, - - Boston.

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 Trade Mark stamped in
 inside of coat.....



INDIA RUBBER WORLD

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 HEVEA BRASILIENSIS



GUTTA-PERCHA
 STYROPHEUS GUTTA

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DECEMBER 1, 1907.

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Powdered and Flake	MINERAL RUBBER
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Vulcanized under pressure.

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THE BUSINESS SITUATION.

THE disturbance in the financial world, centering in New York, which has prevailed during a month past, apparently has become much less acute already. Considerable time may be required, however, for general business to recover from the shock caused by the interruption to the working of the credit system upon which practically all commerce is based. A few banks having been compelled to suspend—some of them have re-opened already—there was a widespread tendency to hoard cash and to accept all forms of commercial paper with caution. There is, of course, no less money in existence than before, and no real wealth has ceased to exist. But there was a general curtailment of buying, apart from the limiting of credit, and many persons forced suddenly to realize upon securities found themselves much poorer by the shrinkage for the time being in values. As a result every form of business has been affected in some way, and international commerce as well has felt the effect of the crisis.

The whole situation has been one of suspended credit—the stoppage of the work of an intricate and wonderfully ramified machine. The United States as a nation are vastly more solvent than in 1893, the date of the last real "panic," and as the keynote of American life is optimism the present financial flurry is likely to be passed much sooner than the event of fourteen years ago. The causes of the existing situation, of course, remain to be

defined and dealt with, but there is no such emergency as to cause fear that capable hands will not be found for this work.

Business in the rubber trade appears to have been in larger volume during the twelvemonth preceding the recent disturbances than in any other like period, and very many persons were disposed to feel that good trade conditions would continue indefinitely. At the leading centers, however, a feeling of caution was taking shape. Great transportation companies, estopped from further expansion by an unfriendly anti-corporation spirit which hindered them from securing further capital, were buying fewer supplies, and other evidences of a "slowing down" were evident to observant financiers. Finally, the better sentiment in the banking world demanded the retirement of certain speculative elements, which was followed by a "run" on a few banks and their suspension, but there is no proof that any of those banks is not solvent. The result of all this has been a marked check to activity in the rubber trade, along with other forms of business. The feeling is general that this will not be long continued, but just how long is the question.

After recovery, what? The country must continue to develop, and must have more commodities of all kinds, rubber goods included. Doubtless an era of more caution in the matter of credits is at hand, and less recklessness in the matter of doing business with insufficient capital. If, added to those desirable features, there shall be an improvement in the currency system, devised by congress as a result of this recent object lesson, the so-called "panic" of 1907 may not prove an unmixed evil.

QUACKERY IN THE TIRE FIELD.

THE first pneumatic tire ever made doubtless ended its career by becoming punctured, and possibly the same thing will happen to the last pneumatic tire that ever will be made. Yet not all these tires suffer such a fate, and the chances that a good tire will render good service are so great that many millions have been made and sold and used, and the rate of production is now greater than ever before. A single firm announced recently that it had produced altogether upwards of a million pneumatic automobile tires, and everybody who has bought one tire knows that a million of them call for a big pile of money. What better proof could there be that rubber tires are good tires?

At the same time there appear to be in the world some millions of timorous souls who regard all pneumatics with distrust. They want pneumatics, but insist upon it that they shall not puncture. What is more, they undertake to aid the tire by investing in all kinds of puncture preventing devices or substances. The recent financial stringency might have been avoided if the banks could have had command of all the money which inventors of so-called anti-puncture systems have paid out in patent office fees. Some of

these schemes have progressed far enough to be offered to the trade, and, totally regardless of merit, these have found buyers.

It all reminds one of the patent nostrums for the cure of human ailments. There are people with all sorts of real or fancied diseases who seem constantly to be on the lookout for new remedies for them; the more ridiculous the claims made for any given "cure-all," and the less it is countenanced by men learned in medicine, the more apt the stuff is to find buyers. So with the anti-puncture inventions. It appears to us that if any of these schemes had any merit it would be recognized by no one sooner than by the reputable makers of pneumatic tires, who would gladly and speedily offer to buy them at prices that would make the inventors rich. The best judges of puncture preventives or cures ought to be the men who have made the pneumatic tire an article of so much value to the world.

THE COMING DEMAND FOR SOLID TIRES.

THE commercial motor trials in England, under the auspices of the Royal Automobile Club, reported in this journal last month, have been followed by events in other European countries which indicate a deep and widespread interest in the practical development of this class of vehicles. In fact, the commercial motor just now appears everywhere to be attracting a larger degree of public attention, relatively, than automobiles of any other type, which is not unnatural.

The automobile as first developed, while undoubtedly of great utility, is first of all an article of luxury, which has appealed to popular interest largely on account of its connection with sport of a spectacular sort. Its use is limited to the wealthier members of society, and people of at least comparative leisure—classes liable to become deeply absorbed in a new form of recreation for a while, after which it gives way to some other diversion. It is not meant here to intimate that the use of automobiles as pleasure carriages has reached its limit, or shows any signs of coming to an end; but the growth of such use that has been so marked during ten years past can hardly continue indefinitely at the same rate.

Like horse drawn carriages, the automobile is for the most part an article of luxury, and the demand for such articles is subject, often without warning, to curtailment, just as now happens, when far-reaching economic changes are in progress in Europe and America alike. We have seen no reason to describe the situation in New York, for example, as resembling in any way a "panic," but it is conceded, we believe, that the placing of orders for new cars at the recent great automobile shows was less active than in former years, though the exhibits were of a higher type of excellence. The situation is simply one of greater caution in the matter of spending money for what may be done without.

The commercial vehicle, however, belongs to a class wholly apart. As the automobile was first developed to a high degree in Europe, so the possibilities of the self propelled goods wagon were first appreciated there, and the economy of the latter is being studied now as a commercial question of the first rank. The same condition is developing in America, where, the makers of automobiles having brought themselves in line with the leading makers abroad, the construction of practical and economical commercial vehicles is being taken in hand. It is an indication of the new progress that a special exhibition of commercial motors is now in progress in Chicago.

The difference between these and the pleasure vehicles is that the former are in a broader sense articles of necessity. The business man who may feel impelled for any reason to stop buying automobiles, may at the same time decide to buy more commercial vehicles, as an element in the more economical running of his business. And in this class must be reckoned motor 'buses, motor cabs, and the like. It is true that the motor 'bus services of London and Berlin have not realized all the promises made for them, but signs of improvement are in sight, and in London at least the number of horse drawn cabs on the street has been lessened very materially within a year or two.

All of which leads to the suggestion of the importance, on the part of the rubber industry, of providing tires suited to commercial vehicles, with no less painstaking than has been shown in the case of pneumatics. The fact that a tire is solid, and therefore immune against punctures, does not justify equipping a delivery wagon with cheap, poorly compounded, possibly ill-fitting rubber. Economy in use is the test—the lowest cost per service mile—and while many excellent solid tires have been made, we greatly doubt that the limit of improvement in them has been reached. This is a matter of all the more importance to the rubber trade, for the reason that ultimately the demand for tires for commercial vehicles must be many times greater than for any other class of automobiles.

THE INDUSTRY IN JAPAN.

OUR readers will remember the appearance in this paper a month or two ago of some views of buildings of the industrial exhibition held at Tokio during the past summer, together with some notes from a Japanese correspondent on the progress made by his countrymen in many branches of manufacturing, including the rubber industry. This exhibition, as was then stated, was purely national, no foreign displays having been invited. Had the few imposing buildings shown in our illustrations constituted the whole exhibition, it would have been no small affair, but this was not the case. We have seen an album of views of all the structures put up for the occasion—numerous, extensive, and many of them architecturally attractive. The mere fact of their existence proved a

deep and substantial interest in industrial development, and all reports are to the effect that the contents of the buildings were worthy of the pains taken to house them. Moreover, the people evinced their interest by a liberal patronage of the exhibition. On a single day, we learn, there were 116,000 visitors, and the gates were open for several months.

All this, of course, did not have to do with rubber. But its pertinence to the rubber industry is clear. The industries of modern Japan are being developed along lines copied from Europe and America, and as everybody knows, each new industrial advance makes a new demand for rubber goods, to say nothing of the individual consumption of rubber among the people. This is understood in Japan as elsewhere, and the government has not been slow to use its influence to encourage the production at home of every class of rubber goods that may be required, especially for public use.

This governmental policy is similar to that of Italy, a great rubber factory in which country was described in the last INDIA RUBBER WORLD. Italy is now obliged to import practically nothing in the shape of rubber goods. Not only this, but she exports such goods to an important extent, both to countries having no rubber factories, and to those in which the industry is so highly developed as in the United States. For example, we have shown that for the "harnessing of Niagara," Italy, in competition with the world, secured contracts for the great rubber insulated cables used for transmitting power from the falls.

The Italian enterprise is mentioned here only as an illustration of the development actually made in the rubber industry in a country in which it has been founded only in recent years. This will show at least that age in the industry will not be requisite to place Japan in an important position among rubber manufacturing nations.

THE QUESTION OF PLANTING PROFITS.

AS has been reported lately in this paper, the rubber trees tapped on the Vallambrosa estate last year showed a profit of nearly \$1 gold each. The Vallambrosa company paid in dividends to its stockholders nearly \$200,000 in gold last year. Therefore, say some enthusiastic planting companies in glowing circulars: "We can certainly do the same." But can they? We certainly hope so, and believe that some of them will do better. But if Vallambrosa plants *Hevea* rubber in the Far East and is successful it does not prove that *Castilloa* planted in Central America under different management will be equally successful. In other words, would not absolute fairness to the investor in selling stock of a plantation growing *Castilloa*, or *Ceará*, or *Kickxia*, lead the seller to explain that it was a different tree, possibly, in their judgment a better tree, but anyhow to explain?

This is not written with the idea of insinuating that the *Hevea* is the only rubber tree that can be cultivated profitably. It is our belief that all of the trees named, in the right location, and properly handled, will be good producers. Is it not, however, the planters' duty of sorts other than *Hevea*, and in locations other than Ceylon or the Federated Malay States, to furnish facts and figures showing production and profits—that is, if they are going to sell stock?

ONE OF THE MOST SINGULAR THINGS in connection with the rubber history is the failure of England—a country which ranks so high in this branch as a whole to do better in respect of hard rubber. It appears that the last factory in the United Kingdom making a specialty of hard rubber goods, after a one time prosperous career, has been closed, with no prospect of having a successor. The English continue to make other rubber goods in large quantities, and to export them on an increasing scale, but they must send abroad for hard rubber. It is not strange that the British fiscal policy should be blamed by some for this condition, but this is more easily asserted than proved. Besides, why should the effect of free trade upon hard rubber differ from its effect upon soft rubber? Evidently there are people somewhere else who have mastered the hard rubber industry better than the English, and perhaps it would be wise for manufacturers in this line in several other countries not to feel too securely entrenched against competition from abroad.

IT APPEARS IN ORDER TO OBSERVE that, although rubber price levels have changed recently to a greater extent than for a year or two past, so little has been heard of the alleged influence of speculators upon the market. In the financial world speculators are ever busy in "bearing" as well as in "bulling" the prices of stocks, but it is only when rubber begins to soar that the cry is heard that it is the work of speculators. No doubt speculation—in the sense in which the word is most commonly used—is responsible as often for cheaper as for dearer rubber. But in the long run speculators do not "make the market," and until conditions arise not yet foreseen, consumers must take long chances in the matter of figuring on what their raw rubber is going to cost them for any considerable time ahead.

INQUIRY IS BEGINNING TO BE ACTIVE for machinery for use in the preparation of raw rubber—for the new type of "rubber factory" to which we devoted an article recently. The demand for such machinery is of too recent growth for standard types to have resulted, but the demand is growing, and likely to rival in importance the requirements for rubber goods factories. It does not seem too early for enterprising machinery builders to begin to turn their attention to this new rubber interest: some are doing it already.

THE PLANTERS' ASSOCIATIONS in Ceylon and the Federated Malay States, without doubt, have promoted the rubber planting interest in those colonies to an important degree. They have brought about the coöperation of their members in many matters pertaining to plantation development, the preparation and marketing of rubber, dealing with the local authorities, and so on. The associations have thus become recognized as truly representative of the planting interest, as, for example, when petitioning the government on any matter of mutual importance to the estate owners. But the high character maintained by these organizations is due not a little to the fact that they have never been used for the selfish advantage of individual members, but only for the common benefit.

THE EDITOR'S BOOK TABLE.

BOLIVIA, THE CENTRAL HIGHWAY OF SOUTH AMERICA, a Land of Rich Resources and Varied Interest. [By] Marie Robinson Wright. Philadelphia: George Barrie & Sons. [1907.] [Cloth. Large 4to. Pp. 450 and map. Price \$10.]

THIS is not the first work on South America from the pen of the lady whose name adorns the title page of the present sumptuous volume, and her previous performances had prepared us to form expectations with regard to her "Bolivia" which have not been disappointed. Mrs. Wright has actually traveled in the countries she describes under conditions which have won for her mission the sympathetic interest and coöperation of official and the best social circles, and given her an opportunity to study the circumstances of life of even the primitive inhabitants.

Throughout this work runs a thread of narrative of personal experience which heightens its interest to the reader. Her perspective is such as to afford an informing amount of detail, without wearying one who follows her, while on every page is at least one illustration which either tells a story by itself or serves to elucidate the text. We feel that most readers will agree with Mrs. Wright that Bolivia is a land of great interest, and to very many of them it doubtless will prove a veritable new found land. It is not too much to say that this is the best single work on Bolivia in English.

The authoress visited the rubber districts on the Beni river and presents a number of photographic views illustrating the rubber gathering industry, some of which are the best pictures in this line that we have seen.

CAOUTCHOUC E GUTTA-PERCHA. PER IL DOTT. LUIGI SETTIMI. (Manuali Hoepli.) Milan: Urico Hoepli. 1907. [Cloth. 16mo. Pp. xvi + 253. Price 3 lire = 60 cents.]

THIS is one of a series of practical manuals issued by a leading Italian publisher, written by an official chemist in Rome. The salient points of the history and sources of rubber are covered, though the author has the usual difficulty in handling the barbarous names which the botanists serve up to us. He is more at home in describing the physical and chemical properties and preparation of rubber, and in the basal principles of its manufacture. We cannot entertain his notion that Panama rubber, for instance, is made from *Hevea* smoked with palm nuts and boughs of rubber trees; nor can we quite agree with him that the centrifugal process of treating latex is a grand success. He describes the manufacture of automobile tires with delightful simplicity. Two sheets are placed upon a cotton fabric treated with rubber paste, and put into a hydraulic press. Those who know the goodness of Italian tires will be slow to believe that. The parts of the book which deal with compounding ingredients, substitutes and the like, appear to be based largely upon Mr. Pearson's book, with curious errors in spelling and some other revelations, as when orris root is translated "*le radici di iris*." In the paragraphs on oxide of gold, adamanta, and some others, the Italian translator quite missed the meaning. The book also has tables on the world's production and consumption of gutta-percha, and on the exports and imports of rubber and gutta and manufactures in the Italian trade, from 1890 to date.

COMMERCIAL AND INDUSTRIAL GEOGRAPHY. A TEXT BOOK for schools, colleges, and private reference. By John J. Macfarlane, A. M., Librarian of the Philadelphia Commercial Museum, and Edwin Hebdon, A. M., principal Group A, Baltimore public schools. Baltimore: Sadler-Rowe Co. [1907.] [Cloth. 8vo. Pp. xiii + 383 + xxxvi + charts. Price, \$1.20.]

COMMERCIAL geography treats of the world as one market, with the various nations or sections as producers and consumers. Trade was, is and ever shall be vexed by the selfish few; but there is less of this every day, because the great majority generally prefer to buy where they can buy cheapest and to sell where they can sell dearest. Commercial geography tries to show where to buy and sell. As might be expected, the book before us is at once too broad and too narrow. The authors

need hardly have reminded us that earthly life is dependent upon solar heat and light, that the earth is nearly spherical in form, and that air is an actual substance. Since they attempt to cover all commodities, it is but natural that they cannot dwell long on any, and that the values given each should often be disproportionate. Still, the perspective is fairly well preserved, the expression is short and clear, and the statistics well handled. About a third of the book is devoted to raw materials. Then follow a few pages on manufactures, and the rest of it is given up to a general description of the political divisions of the world. This part is weak in its concept, since commercial geography should disregard political forces and groupings, except as disturbing influences. When commercial geography takes account of governments, it becomes political economy.

THE CONSULAR SERVICE OF THE UNITED STATES; ITS HISTORY AND ACTIVITIES. By Chester Lloyd Jones. [No. 18 in the Political Economy and Public Law Series. Publication of the University of Pennsylvania.] Philadelphia: The John C. Winston Co. 1906. [Cloth. 8vo. Pp. ix + 120. Price, \$1.50.]

THE object of this work is to sketch the history of the consular service, and to point out especially the development, in recent times, of its relations to trade. It also aims to indicate the service actually rendered at the present time, the limits of the aid which consuls can lend to commerce, and the defects in the present consular organization of the United States. There is also a chapter on European consular systems. At this time, when serious efforts are being made along so many lines, for improving consular services, and with promising results, particularly with regard to the promotion of trade, the appearance of this book is opportune; it is also informing, and its suggestions worth considering—not the least important ones dealing with what the consuls cannot do.

EL PALO AMARILLO ("*EUPHORBIA ELASTICA*") COMO PRODUCTOR DE CAUCHO. Por el Dr. Fernando Altamirano. Primera Memoria. Mexico: Secretaria de Fomento. 1905. [Paper. 8vo. Pp. 26 + 6 plates.]

A SCIENTIFIC summary of facts regarding the Mexican "yellow tree" considered as a rubber producer. The tree, by the way, has been renamed recently by the staff at Kew *Euphorbia fulva*. It was illustrated and described in THE INDIA RUBBER WORLD February 1, 1906 (page 148).

HENDRICKS' COMMERCIAL REGISTER OF THE UNITED STATES, for Buyers and Sellers. New York: Samuel E. Hendricks Co., No. 74 Lafayette Street. [1907.] [Cloth. Large 8vo. Pp. LXXXVI + 1224. Price, \$10.]

THE regular appearance of this reference work for 16 consecutive years, each edition being larger than its predecessor, is alone a guarantee of merit. The publishers state that the current volume contains upwards of 350,000 business names and addresses, classified under 31,212 headings, and 76 closely printed pages are devoted to an index of these headings, by means of which the manufacturers of or dealers in almost any conceivable article may be referred to easily. On the whole, it appears to us to be a book of real value. It can hardly be expected to be a complete directory of any given line of business, but if it gives even a few good houses under every heading, it proves a serviceable work of reference. Our only criticism is that some obsolete names are included, and the proofreading might have been done better.

IN CURRENT PERIODICALS.

LE CAOUTCHOUC (ou Nouvelle Caledonie). By M. Etasse, chief of the agricultural service. [The native and introduced species; history of exploitation; illustrated.] *L'Agriculture des Pays Chauds*. Paris. VII-53 (Aug. '07). Pp. 102-120.

PERILS OF THE CRUDE RUBBER TRADE.—*The Brazilian Review* refers to the gathering of rubber in parts of Amazonas as a perilous occupation, and mentions the sending of a detachment of soldiers from Manaus into the interior to deal with Indians who have been killing rubber workers and rifling their houses. At the same time a newspaper from the East reports the capture of a tiger on a rubber plantation in Johore, after he had killed seventeen natives. The tiger measured 12 feet from tip to tip and will be preserved for show purposes.

Tires at the Madison Square Garden Show.

THE second New York automobile show this season was held at Madison Square Garden on November 2-9, under the direction of the Association of Licensed Automobile Manufacturers. In other words, so far as automobiles were concerned, the exhibitors were American makers licensed under the Selden patent. The exhibits of tires and motor accessories were, for the most part, the same as were displayed at the Grand Central Palace show in the preceding week, and embraced a full exhibit by The Motor and Accessories Manufacturers, Inc. There was a larger display than usual of motor cycles, and a good showing of commercial vehicles.

The net result of the two automobile shows, in the generally expressed view, is that the past year has shown a further advance in automobile construction in America, but space will not be taken here for an analysis of the improvement made. The accessories shown embraced many novelties for the increased comfort or safety of the motorist. But it is to the tire features that this report must be devoted mainly.

The clincher type of pneumatic, of course, remains in the lead. As to the tire section and the means for retaining tires in place on the old type of clincher rim, such details have long ago—as the tire trade goes—been standardized. Last year all the leading firms exhibited clincher rims modified by rendering one of the flanges detachable for the more easy removal of a tire. This year the tendency is similarly general to supply rims which are removable entire, the tire coming off with them. The motorist who is equipped with a spare rim of the new type on which is mounted an inflated tire, in case of any tire trouble on the road, has only to remove the rim from the lame wheel and put on the spare one—a simpler matter than dealing with any sort of tire replacement before known. Pneumatic tires are stronger, perhaps, than before, and the evident tendency is to equip cars of a given weight with larger tires. The number of American makers of pneumatic tires has increased during the year, not counting the entrance into the field, as domestic manufacturers, of the Michelin and Continental companies. Some new foreign makes were shown.

AMERICAN RUBBER TIRE MAKERS.

AJAX-GRIEB RUBBER CO. (New York).—Wrapped tread pneumatics, which differ from the company's previously made molded tires in having a cushion of Para rubber between the carcass and the tread, and a breaker strip between the cushion and the tread to prevent the separation of the tread from the carcass. In curing a tire the carcass is first vulcanized and the tread which varies in thickness according to the size of the tire is put on raw and hand wrapped, after which the old tire is cured by the open steam process.

REPRESENTATIVES.—Horace DeLisser, president. Branch managers: Leon B. Smith, New York; J. B. Burwell, Chicago; Charles Hatch, Detroit. R. S. Ireland and H. M. DeSilva, traveling salesmen.

CONSOLIDATED RUBBER TIRE CO. (New York and Akron).—This company showed for the first time regular type automobile clincher pneumatic tires, which they describe as the "Kelly-Springfield," the designation by which the solid tires made by the same company have so long been known.

REPRESENTATIVES.—Van H. Cartmell, president; F. A. Seaman, secretary; S. S. Miller, factory superintendent. Branch managers: F. A. Kissell, Philadelphia; Stanley F. Hall, Boston; F. E. Holcomb, Southern representative; E. J. Todd, Connecticut representative. Salesmen: F. A. Oatman and E. S. Roberts, New York.

CONTINENTAL CAOUTCHOUC CO. (New York).—Pneumatics in three styles—Continental round or wrapped tread, flat or racing tread, and "rouge ferré" or anti skid, the latter being metal studded. The flat treads have corrugated surfaces, and all the

styles are furnished in American and metric sizes. A new detachable or demountable rim was shown, held in place by bolts passing through the felloe and having washers which grip the rim. This system can be adapted to any type of tire. The idea is that the motorist may carry a spare rim, having on it an inflated tire, and in case of puncture this can be substituted readily for the rim and tire on the wheel which is the seat of the trouble. The Continental company, whose tires hitherto have been made in Germany, have arranged to supply their American trade hereafter with tires made on this side of the Atlantic.

REPRESENTATIVES. J. M. Gilbert, general manager; J. H. Sheldon, sales manager. Branch managers: James L. Gibeay, Philadelphia; Stanley Brooks, Detroit; Mr. Hart, Buffalo; Mr. Thompson, Boston; R. J. Collins and L. E. McMaster, Western travelers; F. S. Bowen, New Jersey and New York state traveler; William A. Rutz, New England sales manager; S. S. Boer, New York salesman.

THE DIAMOND RUBBER CO. (Akron, Ohio).—"Wrapped tread" pneumatics of several types: Regular clincher (one-piece rim), in American and French or millimeter sizes; quick detachable clincher type, for the Marsh rim (also shown by the Diamond company) or other special rims; and tires of the "mechanical" type, for the Dunlop and Fisk style of rims. All these were shown in the flat tread, regular, "Barley Won't Slip," and Diamond non skid treads. The last mentioned is a new tread, in which specially hardened rivets are inserted through rubber and fabric under hydraulic pressure, and secured by washers. The Marsh rim, by the way, has been modified somewhat, so that it can now be manipulated without any other tool than a small wrench. A new feature is the "Diamond Electric," a clincher tire of special construction for light electric vehicles, referred to as usually resilient, enabling cars to go farther and faster than on the tires made for the heavier gasoline cars. Two types of solid tires were shown—the Diamond "wire mesh base" and the "side wire"—both made of a new rubber compound, almost white, and claimed to be extremely tough and resilient.

REPRESENTATIVES.—A. H. Marks, manufacturer; W. B. Miller, sales manager; O. J. Woodard, manager solid tire department. Branch managers: C. H. Smith, Chicago; H. C. Miller, St. Louis; E. H. Fitch, Philadelphia; G. J. Bradley, Cleveland; W. M. Perrett, Detroit; N. E. Oliver, Buffalo; J. W. Paul, Pittsburgh; W. P. Cronin, Boston; W. E. Roby, Minneapolis; W. D. Albright, Pacific coast. James A. Braden, advertising manager. Salesmen: H. P. Howlett, Boston; E. P. Webber, Philadelphia; E. B. Tozier, Cleveland; E. B. Williams, H. C. Mills, B. W. Snowden, J. F. Lanier, George Davidson, J. B. Cothran and E. W. Kidder, New York.

DOW TIRE CO. (New York).—The Dow non deflation tube, the air holding property of which is due to the mechanical action of a layer of flexible fabric about 3-32 inch thick, held in a chamber molded in the walls of the tube. The intended result is to render the tube self-sealing in the case of a puncture.

REPRESENTATIVES.—Alexander Dow, president; Harry D. Gue, vice-president; J. Abrahams, superintendent; Mr. Dunham, New York, salesman.

EMPIRE AUTOMOBILE TIRE CO. (Trenton, New Jersey).—Clincher pneumatics with round, raised oval, and Midgley treads, and inner tubes both red and gray. Also a line of tire accessories, including "the tire preserver," which is a pad of cotton fabric and rubber to fit over the inner tube with the purpose of strengthening an old case which may have begun to break in the fabric. Also the Empire secondary wire, rubber insulated, for automobiles.

REPRESENTATIVES.—Charles H. Semple, president; A. Boyd Cornell, secretary; W. G. Whitlock, sales manager. Branch managers: E. B. McKay, Chicago; W. H. Chadwick, Boston; H. B. Smith, Buffalo. E. B. Richardson, general traveling salesman; J. C. West, Southern traveling salesman.

EMPIRE STATE TIRE CO. (Buffalo, New York).—Greenwald non-

skid tread, Greenwald extensible tread pneumatic, for which the company named control the trade in New York and some other states. They also market the sectional repair vulcanizer for tires.

FIRESTONE TIRE AND RUBBER CO. (Akron, Ohio).—The "side wire" solid tires for motors and other vehicles, and also pneumatic clincher tires and inner tubes. Two new features were the dual non skid tread for pneumatics, consisting of two ridges of rubber extending around the tire. This tread is thicker than on the regular Firestone wrapped tread, and the surface of the two ridges is corrugated to afford further protection against skidding. Another novelty was the 1908 Firestone dismountable rim, which may be used in connection with any clincher tire; its dismountable portion is held on the felloe by six bolts, the removal of the nuts allowing the tire and clincher rim to slide off in one motion.

REPRESENTATIVES.—Branch managers: O. R. Cook, Cleveland; J. V. Mowe, Chicago; Frank L. Martin, Detroit; W. P. Berrian and Walter Wells, New York; R. J. Firestone, general sales manager; E. P. Cleveland, Detroit; Thomas Glenn, Boston; W. R. Walton, Philadelphia; C. E. Jackson, Pittsburgh. Salesmen: E. M. Eldridge, New York; P. B. Talbot, Boston; J. V. Spencer, traveling salesman. J. S. Singleton, advertising manager, and T. Z. Binkard, specialties.

THE FISK RUBBER CO. (Chicopee Falls, Massachusetts).—Showed the well known "mechanically fastened" pneumatic and also tires to fit the regular clincher and quick detachable rim. The mechanically fastened as now shown is more readily detachable than formerly. Fisk tires are made with regular and "Bailey Won't Slip" treads.

REPRESENTATIVES.—H. T. Dunn, president; H. G. Fisk, secretary; E. H. Broadwell, sales manager. B. H. Pratt, special Chicago representative. Branch managers: William Lambe, New York; George Campbell, Boston; James Kavanaugh, Cleveland; C. H. Gage, Pittsburgh; Samuel Moses, Buffalo. Fred Ayres, New England salesman; B. F. McIcell, Indianapolis salesman.

G & J TIRE CO. (Indianapolis, Indiana).—Round wrapped tread clincher tires in addition to the company's former flat tread, and also the Midgley tread for antiskidding. The company's tires are made in G & J and Dunlop types, and the Bailey tread is supplied to customers desiring it. Solid rubber bumpers were shown.

REPRESENTATIVES.—B. C. Dowse, president; G. H. Hamilton, sales manager. Branch manager: Mr. Philp, New York. Salesmen: Herbert Githens, Indianapolis; Charles Mcnson, Detroit; Frank Berrodin, Buffalo; Mr. Price, Boston; Mr. Cropley, Chicago. H. C. Prentice, traveling salesman.

THE B. F. GOODRICH CO. (Akron, Ohio).—The regular Goodrich clincher pneumatic type, in smooth, Bailey, and flat treads. Also the Goodrich quick detachable rims. The company have been testing a new white rubber compound for treads but have not yet decided to adopt this as standard.

REPRESENTATIVES.—Branch manager: F. Y. Stewart, New York. Harry Miller, special representative from Akron. Salesmen: W. A. Whitnack, E. J. Dockery, J. M. Ferriday, E. W. Bonham, R. Rhyne and W. H. Hart, New York; R. J. Murphy, Philadelphia; W. S. Talbot and W. W. Mackenzie, Boston.

THE GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio).—The Goodyear universal rim, with detachable flanges, and detachable tires made up in various types were the center of interest in this exhibit. The universal rim was shown as adapted to the various leading types of tires. A new tire made of special fabric is called the "electric tire" on account of being made very light for use on small electric vehicles. Another novelty was the Goodyear heavy tourist non skid detachable tire, with flat or round treads. There were also shown tires for regular clincher rims and also motor truck and motorcycle tires and a 4 inch tire especially to fit rims formerly carrying 3½ inch tires.

REPRESENTATIVES.—I. A. Seiberling, president; C. W. Seiberling, treasurer; George M. Stahlman, secretary. Branch managers: Charles Measure, New York; W. T. Teager, Boston. Salesmen: James Cegeshall and Irving Penniman, Boston; W. M. Doucette, New York state and Connecticut; C. C. Hammerlee, New York city; H. C. Humber, Brooklyn and Long Island; N. A. Merritt.

THE HARTFORD RUBBER WORKS CO. (Hartford, Connecticut).—The Hartford clincher and Dunlop pneumatic tires. The company's new quick detachable tire has a nonextensible wire edge similar to the Dunlop, with a head on the side which fits into the clinch of the rim. The new Midgley universal rim was shown here and the Midgley tread, which embraces a series of endless wire coils running around the tread of the tire and almost completely embedded in the rubber, this feature being applicable to solid tires or pneumatics alike.

REPRESENTATIVES.—J. D. Anderson, president; E. R. Benson, secretary; H. E. Field, sales manager. Branch managers: E. S. Roe, New York; William Bell, Chicago; P. Goodall, Cleveland; E. Breed, Boston. Salesmen: H. E. Snyder, W. R. Brown and E. Fahy, New York; W. E. Orr, Cleveland; Richard Clunan, Hartford; C. Langmaid, Boston.

MICHELIN TIRE CO. (Milltown, New Jersey).—Showed for the first time in America a new compressed tread pneumatic. Its shape is such that when mounted on the rim and the inner tube inflated, the rubber on the tread is compressed instead of being distended, this compression adding to the durability of the tire. A cut in an ordinary round tread envelope tends to open and admit water and sand to the detriment of the material, while with these tires the cuts close up and thus keep out foreign matter. A flat tread tire for heavy road work was shown, and anti skid tires. Also the Michelin demountable rim, which may be fitted to any of the well known detachable rims. Michelin tires are made in American and metric sizes.

REPRESENTATIVES.—Traveling salesmen: R. B. Tracy, James Tansey, William Hobbs, C. H. Hendricks, Harry Snyder, Fred Suhr, Harry Benner, T. A. Bruen, R. C. Smith and Mr. Fiske.

MORGAN & WRIGHT (Detroit, Michigan).—Wrapped tread pneumatics of standard clincher type and also with flat Bailey Won't Slip and Midgley tread. Single tube tires and tire tubes were also shown, and rubber bumpers for the protection of motor car springs. Solid tires of the side wire type were shown.

REPRESENTATIVES.—Charles J. Butler, president; A. I. Philp, vice president; Joseph Weston, secretary. Branch managers: E. S. Hilton, New York; Mr. Alexander, Chicago; B. S. Walters, Philadelphia; A. O. Measure, Boston; George McClaren, manager motor truck tire department. Salesmen: T. R. Burton, John B. Tower, M. M. Marple, A. Straus, G. W. Kayton, T. L. Hausman and G. C. Gaillard, all of New York.

THE MOTZ CLINCHER TIRE AND RUBBER CO. (Akron, Ohio).—The New Motz non skid cushion tire adapted to clincher rims. Demonstrations were given of the resiliency of this tire and the method of attaching it to different makes of rim.

REPRESENTATIVES.—Charles A. Motz, president; Nicholas Seil, secretary and treasurer; Paul Bertsch, a director in the company.

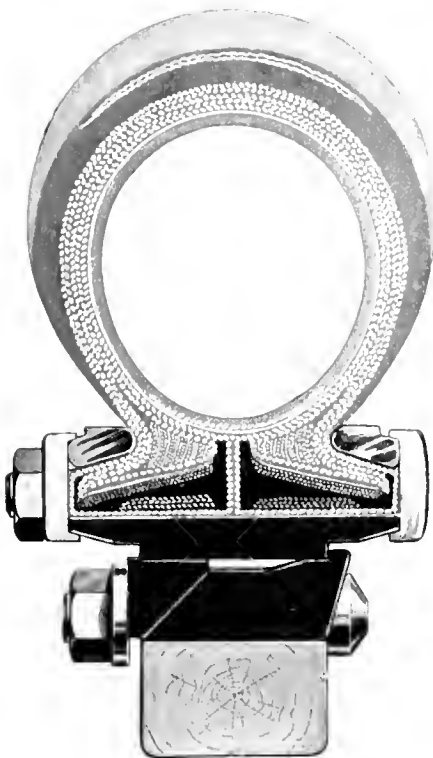
PENNSYLVANIA RUBBER CO. (Jeannette, Pennsylvania).—Clincher pneumatics in various types, including non skid tires equipped with rims of hardened steel rivets studded with strips of leather into the rubber of the tire. Egyptian cotton instead of Sea Island is now used in Pennsylvania tires and some of them are made with treads of white rubber compound designed particularly to resist wear. Single tubes for tires were also shown.

REPRESENTATIVES.—H. W. Dupuy, treasurer; Mr. Alden, general manager; Wilmer Dunbar, superintendent; Frank Walters, manager bicycle tire department; R. B. McMullen, sales manager for motor tire department. Salesmen: George M. Port, general; A. M. Joralemon, and Percy Whitmore, New York; N. A. Tichenor, Pennsylvania.

THE REPUBLIC RUBBER CO. (Youngstown, Ohio).—The Republic clincher pneumatic, which is held on with the company's detachable flange and rim. The outer case forms a perfect cylindrical tube with a broad flat base, it being claimed for the tire that it fits the rim exactly and stays there. The company also showed the Republic tire for regular clincher rim.

REPRESENTATIVES.—L. J. Lomasney, vice president; Frank J. Hill, sales manager; Mr. Petersen, superintendent; Mr. McGuire, mechanical director. Homer G. Martin, representing Brooklyn, Long Island, and New York state. John Kelly, Chicago sales manager.

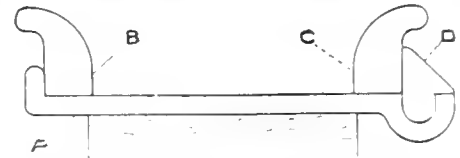
THE SWINEHART CLINCHER TIRE AND RUBBER CO. (Akron, Ohio).—This display embraced the regular Swinehart type of



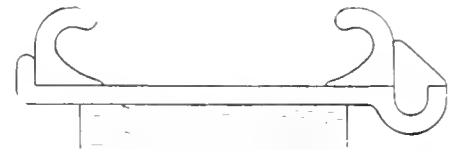
THE FISK REMOVABLE RIM.



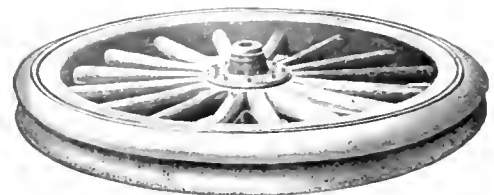
A MOTORCYCLE TIRE.
[Quick Detachable Non Skid Tread
Tire made by the Goodyear
Tire and Rubber Co.,
Akron, Ohio.]



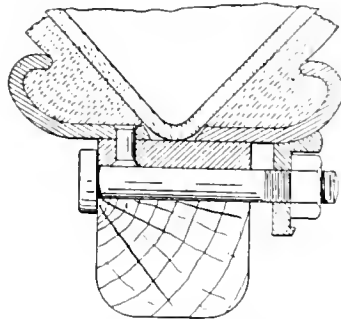
FIRESTONE SAFETY UNIVERSAL RIM
Adapted for any quick detachable tire.



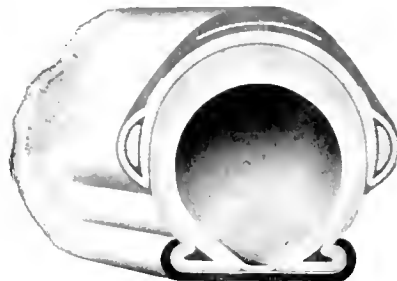
FIRESTONE SAFETY UNIVERSAL RIM
Adapted for any quick detachable tire.



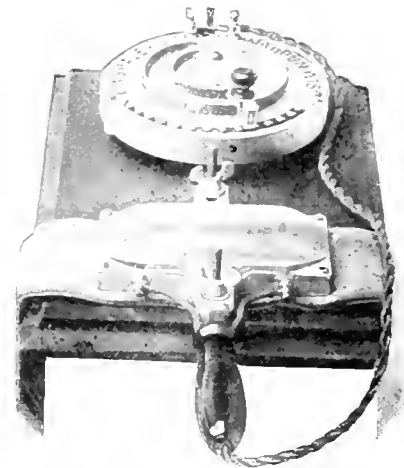
FIRESTONE DUAL TREAD SOLID TIRE
[The illustration represents the largest tire on exhibi-
tion at the recent automobile shows.]



THE PARKER RIM.
[Invention of Orrel A. Parker, president
of the Newmastic Tire Co.]



STANDARD TIRE PROTECTOR.
[Made by the Norris Auto Co., Saginaw,
Michigan.]



SHALER ELECTRIC VULCANIZER.
[Manufactured by the C. A. Shaler Co.,
Waupun, Wisconsin.]



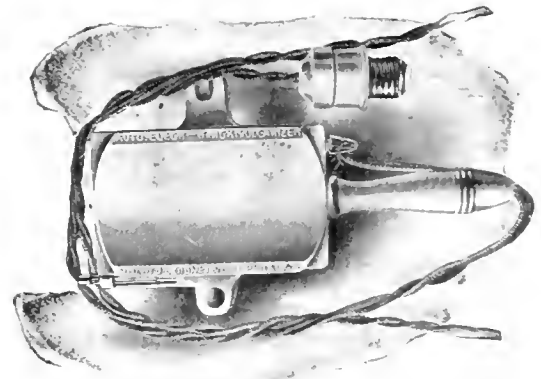
GOODYEAR UNIVERSAL RIM.
[The same showing flanges adapted to any standard
clincher tire.]



GOODYEAR UNIVERSAL RIM.
[Showing style flanges adapted to Goodyear detach-
able tires.]



GOODYEAR TOURIST TIRE.
[Non Skid, Detachable, Flat
Tread.]



AUTO ELECT-TRICK-VULCANIZER.
[Manufactured by J. L. Gibney & Brother, Philadelphia.]

solid tire, some in very large sizes, single and "twin." A new device is a cham resting in a channel all around the tire tread, to prevent skidding and increase traction. A new Swinehart tire in square sections has the tread molded with holes of $\frac{1}{2}$ inch diameter, designed to prevent skidding, besides which the resilience of the tire is increased. The new feature has been described as being the opposite of the Bailey idea, in which the tread is provided with numerous projecting points of rubber. At this stand was shown a new non skid tread brought out by The Rempes Tread Co. (Akron, Ohio). The tread is marked with deep set diamond shaped fret work.

REPRESENTATIVES.—B. C. Swinehart, vice president and sales manager. Branch managers: E. O. Hoopengartner, New York; R. A. Brine, Boston. Salesmen: F. A. Brine, Boston; John Kelly, and A. L. Giegrist, New York.

OTHER TIRES AND SOME ACCESSORIES.

NEWMASTIC TIRE CO. (New York).—Newmastic is an elastic, resilient material, for replacing air in pneumatic tires, for protection against tire troubles. The company showed inner tubes filled with this material, complete tires fitted with such tubes, and the Parker quick detachable clincher rim, patented by Orrel A. Parker, president of the Newmastic Tire Co.

REPRESENTATIVES.—Orrel A. Parker, president and treasurer; Robert H. Hahn, secretary; Otto B. Schmidt, a director; Oliver Edick, demonstrator; William L. Von, New York foreman; William L. Ulyat, New York manager; Charles Bromley, Brooklyn agent; Jefferson Everson, New Jersey agent.

HERZ & CO. (New York).—The tires marketed in America as the Herz tire and Herz's anti skidding tire, manufactured in Austria, by the Wien-Traisirkirchener Gummiwaren-Fabrik Josef Miskolczy & Co., of Vienna. The anti skidding tire is studded with metal rivets.

REPRESENTATIVES.—Gustav Reno, secretary and treasurer; Emil Schoenstein, engineer and foreman; Harry Weber, traveling salesman; Louis Kunstler, New York salesman.

PNEU L'ELECTRIC CO. (New York).—The pneumatic tires made by the Société Industrielle des Telephones of France, in American and metric sizes. Also, "Samson" non skid leather covers. Samples of the rubber insulated electric wires for automobile purposes, by the same French company, appeared at this stand.

REPRESENTATIVES.—L. E. Siegel, store salesman. Henry Weiss and W. R. Coleman, New York salesman.

LEATHER TIRE GOODS CO. (Newton Upper Falls, Mass.).—The Woodworth studded leather tread tire cover, the "Kant-Skid" tire grips, and a leather tire tube. The 1908 leather tread differs from former models in that the strength of the wearing portion has been increased by the use of a two ply chrome leather lining. The new tube offered is made of rubber, covered with chrome leather tanned to give the strength and elasticity.

REPRESENTATIVES.—C. B. Woodworth, president; A. P. Marshall, correspondent; Fred Blumenfeld, New York manager; C. L. Rhodes, traveling salesman.

HEALY LEATHER TIRE CO. (New York).—The standard leather automobile tire which this company has been marketing for more than a year past.

REPRESENTATIVES.—Harry L. Graf, general sales manager; William G. Hurtzig, Morristown branch manager; Albert Olson, New York salesman; R. A. Williams, Brooklyn salesman.

NORRIS AUTO CO. (Saginaw, Michigan).—The "standard" tire protector, invented by W. T. Dorgan, superintendent of the company's factory. They purchase stock from a rubber manufacturer and make up the goods at Saginaw. The protector fits over the tread surface of the tire without any mechanical fastenings.

THE AUTOMOBILE UTILITIES CO. (Boston).—The Shaw self sealing inner tube. The self sealing feature is a layer of compound composed of melted rubber and asbestos fiber, outside the air tube of the tire, the whole being wrapped with canvas.

REPRESENTATIVES.—A. B. Shaw, the inventor; Mr. Hall, president; Nathaniel B. Wales, treasurer. C. A. Fultz and Frank D. Brannan were in charge of the exhibit.

ARTHUR H. MIDDLETON (Philadelphia).—Showed the Hubbard patent tire, of solid rubber, in sections, for commercial vehicles.

ACCESSORIES.—Traver Blowout Patch Co. (New York), patented blowout patches for tires; Auto Improvement Co. (New York), "Ever Ready" tire tool; Weed Chain Tire Grip Co. (New York), chain tire grips; Hopewell Brothers (Cambridge, Mass.), waterproof tire case; The L. J. Muttly Co. (Boston), waterproof fabrics for automobile tops; Ed. Dubied & Co. (Couvett, Switzerland—represented by Ch. H. Dien, New York), rivets for anti skid tires; The Gilbert Manufacturing Co. (New Haven, Conn.), automobile fabric supplies; C. A. Shaler Co. (Waupun, Wisconsin), electric vulcanizers for tire repairs.

CHICAGO AUTOMOBILE SHOW.

THE seventh annual automobile show at Chicago is in progress, having opened on the evening of November 30, to continue until December 7. It is housed, as last year, in the Coliseum building and in the armory of the First Regiment. It is participated in by the National Association of Automobile Manufacturers, Inc., the Association of Licensed Automobile Manufacturers, the American Motor Car Manufacturers' Association, and the Motor and Accessories Manufacturers' Association Inc., making it representative of the whole American automobile industry. During the same dates the first annual exhibition of commercial cars will be open in the Seventh Regiment armory. The various tire manufacturers who exhibited at New York have displays at Chicago.

EUROPEAN AUTOMOBILE SHOWS.

THE sixth International Motor Exhibition of The Society of Motor Manufacturers and Traders, Limited, of Great Britain, was held at Olympia, London, on November 11-23. This show is officially recognized by the Royal Automobile Club and is under the patronage of the King. There were about 140 makes of automobiles on display, and the tire trade was very fully represented.

The thirty-first annual Stanley Show, at Royal Agricultural Hall, London, which has become more important as an exhibition of motor cars than of bicycles, was held November 22-30.

The tenth Exposition Internationale de l'Automobile, du Cycle, et des Sports, at the Grand Palais, Paris, was held on November 12-December 1. The French tire trade, as usual, was strongly represented.

In Germany, the Internationalen Automobile-Ausstellung will be held in Berlin, on December 5-22.

The Brussels exhibition is scheduled for December 21-January 1, and the Italian exhibition, at Turin, to begin on January 18.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of September, 1907, and for the first nine months of five calendar years:

MONTHS.	Belting Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
September, 1907.....	\$131,188	\$305,552	\$295,038	\$731,778
January to August....	920,715	908,440	2,702,777	4,531,932
Total	\$1,051,903	\$1,213,992	\$2,997,815	\$5,263,710
Total, 1906.....	895,296	936,350	2,361,917	4,193,563
Total, 1905.....	856,493	941,858	2,129,936	3,928,287
Total, 1904.....	647,245	844,802	1,779,256	3,271,303
Total, 1903.....	633,744	628,592	1,855,756	3,118,092

THE discovery of asbestos is reported in several places near Dawson (Alaska), and elsewhere in the Klondike region. Rich asbestos deposits have also been reported lately in the mountains of northern Luzon, in the Philippines.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THESE important contracts are now let at a somewhat different date than was customary in former years. The specifications go out about the end of October, to be returned by the end of November. So far as I know there is no alteration this year in the tests decided on three years ago, the

ADMIRALTY CONTRACTS.

alcoholic potash extraction being principally relied upon as indicating whether the best rubber has or has not been used by the contractor. By the way, if rumor is correct, there has been more than one rejection of goods during the past year for not standing the test, but this is a matter which in its details is as well hid beneath the kindly veil of silence. It may not be without interest to mention that a certain amount of repairing work is given out by the admiralty authorities to private dockyards on the Tyne and at Barrow. These sub-dockyards, as they may be called, are obliged to obtain their rubber supplies, valves, packing, etc., from the admiralty dockyards, or they may get them direct from the admiralty contractors. In either case the testing for quality is carried out by the admiralty chemist.

A FRIEND of mine who has recently returned to England after a good many years trading in Borneo had some interesting facts to relate concerning the rubber industry. Borneo rubber, in the white, rectangular, wet slabs in which it used to be known

BORNEO RUBBER.

in England, is now rarely to be met with, the United States having been the principal market in late years. It has always been persistently adulterated by the Chinese collectors, mainly with pontianak. The degree of wetness is attributable to the fact that the natives put it under the water tap, as water, they say, prevents oxidation during transit. My friend, having passed through several years' chemical training, was accustomed to test the raw product, before buying it, in the following way: The slabs were carefully sampled down to a small bulk which was dissolved in chloroform. After standing to allow impurities to settle out the solution was poured into a flat disk and allowed to evaporate. Strips were then cut from the dried rubber and roughly tested for tensile strength with the hand. This mode of testing, although it might be improved upon, is certainly more advanced than appertains in the great bulk of rubber sales.

I was sorry to hear of the decease of this company, the only concern in Great Britain devoted entirely to the vulcanite manufacture. I cannot pledge myself to the exact date of its inception, but I know it is somewhere about fifty years ago

SCOTTISH VULCANITE CO., LIMITED.

that it was founded under American auspices. The complaint from which it has died has been variously diagnosed, the company itself being emphatic that it was the "dumping" of German vulcanite in England under cost price, and something to this effect has occurred in the Scotch newspapers. A rejoinder to this comes from Mr. Winter, the well known London representative of Heinrich Traun & Sons, of Hamburg, it being averred that the cause alleged had nothing to do with it. Mr. Winter does not say what the real cause is, but his tone rather leads one to suppose that he attributes the loss of trade in some way to the management. Without wishing to join in the fray myself, I will merely say that the statement that the price of certain German made goods having been raised since the Scottish company closed its doors seems to deserve notice at the hands of the disputants. The closure of the works is of course a hardship to the hands and staff, some of the latter having been with the company over 40 years. The works are situated in close contiguity to those of the North British Rubber

Co., Limited, at Edinburgh, and it has been suggested that the latter company will probably take them over as additional premises.

[THE Scottish Vulcanite Co., Limited, was founded about 1861 under these circumstances: There had been formed in America the New York Gutta Percha Comb Co., which, though using gutta-percha for its products, was proceeded against by the owners of the Goodyear hard rubber patents and also the newer patents granted to L. Otto P. Meyer. A verdict unfavorable to the company was granted in the United States circuit court at New York May 10, 1850, after which there was a sale of the stock and machinery. The price realized is reported to have been \$25,000, and the purchaser was William Judson, the owner of the English patents to Goodyear for both soft rubber and hard rubber. Judson was one of the directors—then called "founders"—of the North British Rubber Co., then still owned wholly by American interests. The machinery referred to was shipped to Edinburgh and was the first used by the Scottish Vulcanite Co., formed through Judson's agency. It was installed by John Murphy, who had been manager of the New York Gutta Percha Comb Co. Mr. Murphy later returned to the States and for many years was active in the rubber industry, being at different times connected with some very important companies. He is now living retired, in his eighty-fourth year. At one time an interest in the Scottish Vulcanite Co. was owned by Conrad Poppenhusen, the principal licensee in America under the Goodyear and Meyer hard rubber patents, and the founder of the India Rubber Comb Co., at College Point, New York. While the Scottish Vulcanite Co. always maintained a separate corporate existence from the North British Rubber Co., a close business relation at one time existed between them, and their factories were near together, being separated only by Viewforth road, in Edinburgh. The shareholders of the Scottish Vulcanite Co. at a meeting on September 12 last confirmed a resolution "That the company be wound up voluntarily."

Regarding the suits against the New York Gutta Percha Co., above referred to, the charge was made freely at the time that the result was a collusive verdict; that is, that the defendant company consented to Poppenhusen's taking a judgment, in consideration of a certain price being paid for their factory. Poppenhusen fearing that, if the case were defended strongly, his patents might not be sustained. (See THE INDIA RUBBER WORLD, April 1, 1898—page 184.) This charge, however, was strongly resented during the trial of a subsequent suit for infringement of the same patents, brought by Poppenhusen against another New York company and won by him.—THE EDITOR.]

THE somewhat overdue annual meeting of this concern was held in the middle of October, when Sir Harry Johnston made a full statement as to the position of affairs. From this it would appear that the trouble which has been experienced was largely of a legal nature, relating to the concessions, and that this has now been satisfactorily settled. Still the prospects of rubber production, judging by the progress already made, are by no means so rosy as predicted in the prospectus, and it is not surprising that some discordant notes were struck at the meeting. Some vengeful Nemesis seems to take an interest in Liberian rubber companies which, from that started by Mr. Meiter more than 20 years ago, have been more closely associated with disaster than with success. The contract entered into with the Dunlop company for the purchase of the output of rubber for a term of years has been modified in the interests of the cor-

LIBERIAN RUBBER CORPORATION.

poration, the chairman said, though it is conceivable that the other side do not consider themselves the losers. Some comment was made on the fact that Sir Gilbert Parker, M. P., had resigned his seat on the board. This was due, it was explained, to pressure of parliamentary duties; however, as he has just had a new novel published, these duties evidently leave him a certain amount of leisure.

I UNDERSTAND that the Penther machine, the patent rights of which for the world have been acquired, as already reported in these notes, by Mr. James E. Baxter, will shortly be in full work at the new Leyland factory. The delay has been due to the installation of high pressure boilers and high speed engines in order to minimize the cost of the power required to run the machine. In this respect there can be no doubt that the new machinery will prove much more efficient than was that originally used in Germany.

RECLAIMED RUBBER.

Another obituary notice calls for insertion this month. This has reference to Dansk Aivulkaniserings Aktieselskabet, the management of which Copenhagen reclaiming works, Mr. Albert Theilgaard seems to have found too much even for a man of his superabundant energy. The concern had only been in existence two or three years, and worked processes the details of which were not apparent from the patents which formed their basis. I understand that Mr. Theilgaard is now working on the Continent in the interests of a former competitor, the North Western Rubber Co., of Liverpool.

Spain, more particularly Barcelona, is reported as buying increasing quantities of reclaimed rubber, and it has been argued from this that the rubber manufacture in the Iberian peninsula is proceeding apace.

North Wales now has its rubber factory, or at least it is commonly reported to have. Inquiry, however, reveals the fact that the concern in question is by no means on an extensive scale, and that the business at the Holywell factory is limited to dealing in a certain way with waste rubber.

A RUBBER manufacturer of considerable position in the trade, who has paid close attention to Ceylon rubber, in the course of some remarks on the subject to me expressed his disappointment at the present state of affairs. He had been

PLANTATION PARA.

in hopes, he said, that careful cultivation and preparation would have yielded a high class rubber, but it was clear that anxiety to realize had induced planters to rush the preparation and so to reduce quality. Quantities of *not* first rate quality were now coming into the market, and this, despite its dryness, was being sold at or below the price of fine Pará. There is a ready market for all this rubber, as it is being used instead of African qualities. The above remarks, coming from an authoritative source, are important when compared with statements which have recently emanated from scientific laboratories in London where the subject of rubber has just commenced to receive attention.

THE death of Mr. George Banham removes from our midst a typical Lancashire man, and one who during the protracted lawsuit of Reddaway & Banham, now a matter of ancient history, was a familiar figure in the precincts of the London Law Courts. Of somewhat rugged exterior, Mr. Banham was of a thoughtful and kindly disposition, which showed itself in many ways in his business dealings. The success attained by the belting works which he established in Pendleton, Manchester, are a tribute to his indomitable energy in business matters.

OBITUARY.

THE melancholy reports issued by the London companies have given a setback to ideas of fresh enterprises. Of course a good many factors have combined to prevent the success anticipated. The bad weather during the spring and summer and the over provision of carrying facilities in London have to be

considered in addition to the expense for repairs, etc., directly connected with the omnibuses. The Manchester and District company came to an early end mainly because of the opposition of inhabitants on the lines of route. At present the future of the commercial motor wagon seems much more promising. A type that is attracting some attention is the Berna commercial motor lorry of 4 to 6 cylinder and carrying one to five tons. These are made in Switzerland and have for some time been used as mail carts in that country. I understand that manufacturing firms who have goods to deliver a few miles off are not showing keenness to purchase motors for themselves, but are more disposed to pay a motor transport company to do the carrying; this is more especially the case with engineering firms who have no daily use for carts or motors. These commercial motors are fitted mainly with "twin" solid tires, such as are supplied by the Dunlop, Shrewsbury and Challiner and other companies. Reference to solid tires reminds me of the recent dictum of the London commissioner of police objecting to the use of sectional block tires on omnibuses; more will probably be heard of this, as it applies not only to omnibuses but to the freight motors which travel at about the same pace.

FROM an engineering firm largely concerned with the manufacture of plant for rubber plantations in the Malay States, I have it that there is an increasing demand for vacuum drying plant. With plantation rubber in hot climates steam raising is troublesome as well as apt to be expensive, and besides there is necessity for absolute dryness being obtained. The main facts which appear to have militated against the wider use of vacuum plant in European rubber factories are the initial cost and the amount of labor involved in charging and discharging compared with what obtains in the the case of steam heated rooms.

VACUUM DRYING.

IN connection with pumping operations in mines where the water frequently contains sulphuric acid derived from the oxidation of pyrites, a good deal of trouble has been caused by the wearing of the valves, whether made of phosphor bronze or other special alloys. In several cases such valves have been replaced by gutta-percha valves with very satisfactory results. Probably other bodies, such as rubber or Dermatine, would answer the purpose equally well. The action is not merely that the acid water dissolves the metal, but that electrolysis is set up between the dissimilar metals, *i. e.*, the iron piping and the valve alloy, the metals being rapidly eaten away. With the use of gutta-percha the iron piping is not appreciably attacked.

GUTTA-PERCHA VALVES.

ALTHOUGH, as has always been the case, engineers still find it a cause for complaint that rubber body blocks are not everlasting, their use shows no great diminution. To some extent they are being replaced by felt or cork, as possessing greater longevity, but in England at any rate vulcanized rubber is still the principal material in use by the railway rolling stock manufacturers. Perhaps it may not be superfluous to state that the body block, the object of which is of course to lessen vibration, is placed between the sole bar of the iron frame and the bottom rail of the body of the coach. The ordinary size is 5x3x1 inch, and numbers of them are used, as many as 60 being utilized in one coach of the large bogey type. Messrs. Spencer, Moulton & Co., so well known in connection with railway rubber fittings, had a patent which I believe has now expired for body blocks, but although this is one of the goods they still specialize in, it is evident that in the case of such a simple article a good deal of competition exists. The patent for Spencer's railway buffer having expired, buffers of similar make are now being made by one or two other firms. While on the subject of the Bradford-on-Avon firm, it may be mentioned that the title is now abbreviated to Messrs. George Spencer & Co., the place of Mr. Johnson, the late manager, being now filled by Mr. Sidney Spencer.

BODY BLOCKS.

CONCERNING MOTOR BUSES.

Rubber Selling Conditions in England.

UNTIL recently the India Rubber Manufacturers' Association of Great Britain has not taken cognizance of questions arising from sales of crude rubber by importers and brokers to manufacturers. But the matter of discrepancies in delivery weights has now been brought before the association, and it is understood that the members are making inquiries with the object of eventually arriving at a situation more satisfactory to buyers of rubber. There is no other association in England whose object specifically is to govern the rules of sale between rubber importers and manufacturers. Should any dispute arise, it is a matter of direct negotiation between the seller and the buyer.

There are, however, certain points upon which there is uniformity of practice in the trade, based upon the "Conditions of Sale" adopted by the Liverpool General Brokers' Association, Limited, in addition to which the London and Liverpool rubber merchants and brokers have, at various times, signed agreements regarding terms of sale supplemental to the rules of the Liverpool association. One such agreement, operative since May 1, 1901, relates to transactions in Pará, Peruvian, and Batavian rubbers. Another, in force from July 1, 1906, establishes the allowance for draft, to compensate the manufacturer for any loss in weight between the time of delivery of rubber from store and its arrival at the factory.

The situation in general is summed up thus, in a statement made to THE INDIA RUBBER WORLD by a leading firm of Liverpool brokers:

"The allowance of $\frac{1}{2}$ per cent. for draft is made to compensate the manufacturer for any loss in weight between time of delivery from store to the time at which the manufacturer receives it at his works. Generally speaking, importers guarantee weights as delivered at manufacturers' works, but the $\frac{1}{2}$ per cent. draft allowance above mentioned is taken into account before any claim is made.

"As regards the question of quality, importers—in the case of medium grades—sell on the basis of a sample, and guarantee quality delivered to be fairly represented by sample forwarded; and, in our experience, manufacturers treat this question in a very fair manner.

"As regards the date of delivery, a parcel of rubber is sold for a specified date, and the seller fails to deliver within the time specified; in the first instance it is a matter of arrangement between the respective parties, but failing an agreement (if sold under Rubber Contract rules and the General Brokers' Association rules) the manufacturer has recourse to the rules of this association, in which case the method of procedure is for each party to name an arbitrator, and the said arbitrators have power—in case they do not agree—to appoint an umpire, the decision of the majority of the arbitrators being binding on the respective parties."

The Liverpool form of contract follows:

LIVERPOOL.....190..

M.....

We have this day you the following Goods on the terms of the Liverpool General Brokers' Association, Ltd., conditions of sale:

.....
 Payment Cash in 14 days less $2\frac{1}{2}\%$ (or before delivery if required).

Customary allowances. Yours respectfully,

Brokerage per cent.

On the back the Liverpool conditions of sale are printed in full. It is specified that all goods sold at public auction—as is true of much of the rubber and many other commodities imported into England—shall be considered as sold subject to these conditions.

Brokers buying or selling shall be responsible as principals unless they name their principals before concluding the contract.

Unless otherwise stated, the buyer shall have the option of taking goods bought at landing weight or reweight. When taken at landing weight draft is allowed; otherwise it is not.

When used in reference to quality, the term "about" shall mean within 5 per cent. over or under the quality specified. When a cargo or parcel or a remnant is sold as "more or less" in quantity, the buyer shall accept the whole of such parcel or remainder.

There are rules relating to responsibility of buyer and seller, respectively, in case of accident, damage to goods, death of one of the parties, failure to fill contracts, and so on.

"Whenever it is admitted by the seller, or decided by arbitration, that the seller has failed to declare or tender goods to fulfil any contract, the buyer may close the contract and at his option invoice back the goods to the seller at once at a price and weight to be fixed by arbitration (which price shall not be less than $\frac{1}{2}$ per cent. nor more than 10 per cent. over the estimated market value of the shipment or delivery contracted for on the day upon which the default occurs), the difference to be due to the buyer in cash in 14 days from such default."

In case of any dispute arising, the matter shall be referred to the arbitration of two members of the General Brokers' Association, one to be chosen by each party in difference, such arbitrators having power to call in another if they desire. In case these arbitrators fail to make an award, the question shall be referred to arbitrators, members of the association or not, to be appointed by the president of the association. For the purpose of enforcing any award, under such arbitration, there are rules for the reference of the matter to the courts of justice. In case either party shall be dissatisfied with an award of arbitrators, a right of appeal shall lie to the appeal committee of the association, whose award shall be final and binding upon both parties.

RUBBER CONTRACTS.

Under the agreement of May, 1901, when a parcel of rubber is sold for a specified shipment, with a guarantee of quality—other than fine or entrefine Pará—and found inferior, buyers must accept the same with an allowance, provided such allowance in the opinion of the arbitrators be not more than 3 per cent. of the contract price; but should the parcel be rejected, the seller to have the option of substituting guaranteed quality on the spot to fulfil his contract within three days.

"On contracts of 5 tons and upwards, buyers have the option of refusing tenders of less than one ton, except in completion of contract."

"In the event of a tender of fine rubber being found on inspection to contain an admixture of entrefine, the sellers shall not be required to retender same after selection, unless such admixture be 5 per cent. or over."

"Sellers and buyers may select any member or representative of any recognized firm in the Pará trade, in London or Liverpool, to act in the capacity of arbitrator."

DRAFT ON RUBBER.

The agreement below was signed by 65 London houses and 28 in Liverpool, including rubber importers, merchants, and brokers, and representatives of rubber plantation companies:

"WE, THE UNDERSIGNED, hereby agree that in all contracts made by us or on our behalf, on or after July 1, 1900, the draft upon all classes of rubber (excluding balata and allied gums) shall be $\frac{1}{2}$ per cent. taken upon the total gross sterling amount, the $2\frac{1}{2}$ per cent. discount to be allowed on the sterling amount left after deduction of such draft. For instance:

Total gross	£1,440	0	0
tare	069		
net	4,471	55	2d.
1½% draft on	£1,155	0	2
2½% discount on	£1,149	4	8
	£1,120	10	1

"This to form an additional rule to the rubber contract rules as agreed by the London merchants and brokers and the Liverpool representatives on April 18, 1901."

THE SCIENCE OF RUBBER RECLAIMING.

BY W. T. BONNER.

THE above caption possibly meets with some objection from technical workers in the field of rubber research, claiming that as yet no science is employed in this important department of the rubber industry. Admitting that their objections may to a certain extent be true, even though based upon superficial grounds, the cause may be placed to lack of knowledge of the structural formation of rubber itself. The lance of more than one of the "Knights of the test tube" have been broken against the breast of this industrial monarch of the tropical forests in their effort to wrest from its sturdy bosom the secret of its "river of life"—among whom none more valiant than the lamented Weber. However, much has been gained of great practical value to the rubber manufacturers.

It is not the writer's intention to enter into any discussion relating to the technical side of the rubber question, but to cover as well as this article will permit the subject of its re-application to its field of original use and the general methods used in its restoration.

It is generally believed, even by many manufacturers of reclaimed rubber, that if the "stock" could be *completely "desulphurized"* in their process, the resultant would approximate closely in efficiency value to the original compound previous to "curing."

Science has proved conclusively that "cured" stock can be completely *desulphurized*, but the product lacks cohesion, is dry and refractory, possessing little or no value in strength, elasticity or compounding efficiency, and it is of value solely as a bulking and resilient filler. This feature is most pronounced in the goods recovered from the purest grade of rubber goods, and is explained by the absence of low grade organic materials, such as oils, tars, waxes, and other cheap adulterants. To utilize this quality of waste as rubber, a means of fluxing had to be adopted, and, so far as the writer has been able to learn, is used in all methods of reclaiming at present. Such fluxes consist of oils, mineral and vegetable, coal tars of different density, and last, but most generally used, rosin oil.

After the rubber to be treated has been finely ground and placed in "pans" preparatory to being placed in the "heater," an amount of the fluxing agent ranging from 5 to 20 per cent. of the rubber is carefully mixed with it in the pans. Then the mass is placed in the heater and direct steam ranging from 60 to 100 pounds per square inch is applied from 12 to 24 hours. The oil is *supposed* to enter the rubber and soften *all* of it, but such is not the case. The molecule of rubber has a most wonderful absorbing capacity for oils, but does not chemically combine. A small percentage of the rubber, not exceeding double the percentage of oil used, unite by absorption with the oil, greatly adding to volume, binding together by oil saturated fibers the still inert *greater* per cent. of "reclaimed rubber." Its ability to be milled into sheets only comes from the binding qualities of the oil saturated portion of the material.

By subjecting the majority of samples of reclaimed rubber on the market to-day to acetone and removing all fluxing material the rubber becomes a dry powdery mass, possessing but little additional value to its state before reclaiming. That the rubber

so saturated with oil has a value is of course without question, but it is also true that if some means of constant agitation could be used during the process of reclaiming, the value of the shoddy would almost be doubled.

After the fact becomes apparent that even if "cured" rubber can be perfectly desulphurized and yet not assume its former proportions, the researcher naturally asks "What has happened to the rubber by its temporary association with sulphur?" The writer will not advance a theory of vulcanization, feeling that he has a good one. But the fact remains that, in spite of desulphurizing, unless a flux is used the reclaimed rubber is dry and refractory to rubber requirements.

Rubber has been placed by the men of science under the roof tree of that great family known as hydrocarbons, whose lines, however, are as plainly drawn as "Mendelejeff's Table of Elements," ranging from anthracite coal to natural gas, embracing comprehensively the whole field, yet yielding none bearing the least *physical* semblance to their adopted relative.

In summing up the work done by the writer, together with some practical tests included, the following deductions are drawn: That the absorption and permanent retention of hydrogen by sulphur from the many complex bodies forming the structural part of rubber leaves the rubber after desulphurizing in a dry and refractory state. Consequently the problem involved is to restore synthetically a sufficient quantity of hydrogen chemically combined with the rubber, and restore it as nearly as possible to its former crude condition, and proving its permanency by the acetone test.

The writer has succeeded in accomplishing nearly all of the above requirements, as well as "recovering" the stock twice over, with an efficiency double any other products examined. He hopes to give further and complete details in another paper. Appended is a simple series of practical tests that ought to be of service to the reclaimer of rubber in his daily business.

For comparing the value of recovered rubber as against the original product by any process for reclaiming:

First. Compound any given quantity of rubber with usual ingredients to obtain a product of a certain desired standard of efficiency. After curing, submit product to the tests required, making careful note of the same for a record of comparison.

Second. After completing tests as above, reduce the product to powdered form suitable for devulcanizing or reclaiming, as is required in all processes. After reclaiming, dry and "mill" the stock as in the usual manner.

Third. Make of the recovered goods, without addition except sufficient sulphur, the same product or object as first made, and cure as usual. Then submit the finished product to the tests as used in the first finished material. The difference in the standards of the original and the recovered is the percentage of efficiency by comparison between the original and the recovered products, provided a proper cure has been effected.

The above is an extremely simple method by which any process of reclaiming rubber can be kept to its highest point of efficiency, while the test can be farther advanced by repeating the operation upon the same product as many removes as desired.

TIRES AND SEWING THREAD.—The increased price of spool cotton is now blamed on the automobiles. At least, the explanation, according to one man identified with the spool cotton business, lies in the fact that a big part of the cotton most suitable for thread manufacture now goes into the making of automobile tires, the demands of the latter having greatly raised the prices to the thread people.

The Anglo-Malay Rubber Co., Limited, announce an *interim* dividend of 10 per cent. The entire dividend last year was 18 per cent. Recent quotations, £5 17s. 6d. to £6 for fully paid £1 shares.

New Rubber Goods in the Market.

THE "FAIRFAX" RUBBER.

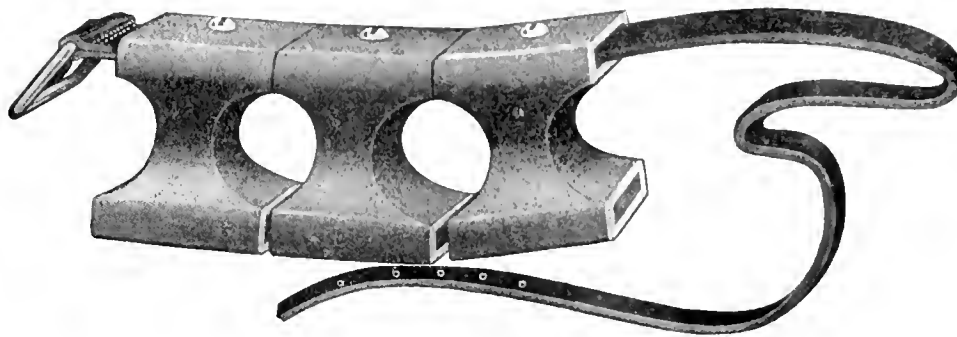
SOMETHING new in rubber overshoes is the "Fairfax," which is quite as natty as anything need be in the line of rubber footwear. Its appearance just now is in answer to a demand for something to be worn over the prevailing style of shoe, which has the Cuban heel and narrow toe. Many ladies have found much discomfort in that the ordinary rubber has failed to meet every requirement of the peculiar cut of the popular last. The "Fairfax" is made mainly in SS width, both in cloth and rubber shoes. The former will be found especially desirable for the coming days of cold when a well protected foot insures comfort and health. Their particularly close and smooth fit gives them the final touch of completeness. [American Rubber Co., Boston.]



THE "FAIRFAX."

VICTOR BOW SPREADER.

THIS device is designed to prevent chafing, bending, and breaking of bows when the auto top is down. These spreaders do not allow the top to crush down entirely, and because of this the top and lining are prevented from rubbing, and friction is minimized. This is a very important feature, and their use is said to save the cost of the spreaders many times. Another point to be considered is that of jar, shaking, and rattling, which are also lessened appreciably. The shape of the spreaders is such that they will fit and hold any size bow, and they are the proper thick-



VICTOR BOW SPREADER.

ness to keep the top from crushing down. Their size is 1 $\frac{1}{4}$, 1 $\frac{3}{4}$, 2 $\frac{1}{8}$ inches. The illustration shows one-half the set and shows it as furnished regularly for a four bow top. More or less rubbers for a three or five bow are also furnished. In construction it is made of a number of sections of pure, new rubber with a neat strap running through and is extremely simple to use. All that one has to do is to unbuckle the strap, pull the loose end through the flat opening in the end of the rubbers, spread the loose ends of the rubbers and push them between the bows, run the strap through again, pull it hard and buckle tight. When not in use it can be tossed into the tool box or under the seat. These can be had in natural rubber with 24 inch russet strap, solid brass buckle with black strap, also japanned with black or russet strap. [Victor Rubber Co., Springfield, Ohio.]

HARTFORD "ROUGH RIDER" GRIP.

A NOVELTY which doubtless will be appreciated by motor cyclists is the "Rough Rider" grip, illustrated herewith. It is nothing more nor less than a pure flexible extension for the regulation handle bar grip. It is made of rubber, of course, but is twice the length of the ordinary grip, the added length projecting

beyond the handle bar proper, thus affording the rider with a firm hold for the rider. The "Rough Rider" grip enables the driver to do away with all the jar and jolt heretofore felt by the wrist when driving with the hands on the regulation grip. Although very flexible, the "Rough Rider" cannot come off the bar until



ROUGH RIDER MOTOR CYCLE GRIP

the driver is willing, and its makers say it will give as long as the motor cycle itself. Its simplicity and low cost, combined with the satisfaction which it seems to give, are calculated to make it very popular. [The Hartford Rubber Works Co., Hartford, Connecticut.]

A NEW SPECIALTY IN RUBBER FABRICS.

MR. L. J. MUTTY, who for many years was with the Cable Rubber Co., and later the owner of the L. J. Mutty Co., in Boston, has developed a large business in the line of special fabrics for the automobile trade such as tops, robes, and the like, with a specialty that is his own creation and that has been very successful. That is the manufacture of high grade calendered rubber cloths for automatic pianos. The "player piano" is something for which there is a very large market. There are in the United States alone probably 100 manufacturers of this instrument. One part of the mechanism called for a disc which formerly was made of skived leather. It was, however, unsatisfactory, as it was always too thick and often hardened. Mr. Mutty evolved the idea that fine calendered cloth would do the work and he was successful and has succeeded in wholly displacing leather and other substances. This cloth is made up in various colors and of various fabrics. The finest grade, however, is done on silk, and is by actual measurement only 3-1000 of an inch in thickness. Of this the silk is only 3-2000 of an inch in thickness, and the rubber 3-2000 of an inch. This is probably the thinnest calendered work that has ever been done, and indeed it is what many factories that do good work would consider impossible. It is necessary that the stock be calendered rather than put on with a spreader, as the "player piano" oftentimes is sold to go to the tropics and rubber that has ever been in solution perishes sooner than that which has not. The L. J. Mutty Co., by the way, have now a new location at No. 28 Summer street, Boston.

THE KING GOGGLETTE.

THE gogglette illustrated here is called the No. 2, it being an improved type of the one brought out by Mr. King last year. The frame is made of aluminum in an elliptical form, while small louvers are formed along the edges to give ventilation. This feature prevents the fogging of the lenses. The lenses may be detached for cleaning or replacement, the inner steel frames upon which are mounted the pneumatic rubber cushions making this feature possible. These cushions fit the face closely, excluding wind and dust. The steel inner frames are made to spring into the aluminum outer frames and hold the lenses securely, and the two parts of the frame are connected by a chain which may be

readily adjusted to fit the face. The inner frame is released with the utmost ease, a simple pressure upon the ends of the lenses causing the inner frames to drop out and the lenses with them.



THE KING GOGGLETTE.

Smoked or amber colored lenses may be had to take the place of the usual white ones which are supplied and the makers also furnish ground lenses to prescription. [The Julius King Optical Co., No. 48 Maiden lane, New York.]

POMMEL SLICKERS.

SAWYER'S "Excelsior" brand of Pommel Slickers is so designed



POMMEL SLICKER AS A RIDING COAT.

as to afford full protection to both rider and saddle from the hardest storm. It is also easily converted into a walking coat. When used as a riding coat the extensions in front and back of the coat fully cover the saddle, fitting closely to the back of the horse, thereby insuring a perfectly dry seat for the rider. The skirts of the coat are made very wide and furnished with buttons near the bottom, which may be fastened around the ankle, thus taking the form of leggings. [H. M. Sawyer & Son, East Cambridge, Massachusetts.]



POMMEL SLICKER AS A WALKING COAT.

is a bent flat wire retaining an absorbent, such as cotton waste, loose cotton, etc., the terminating point of the wire bearing against the pen point so as to feed the ink thereto as required when the pen is in use. By a modification the flat wire is replaced by twisted wire in which the absorbent is held. When the pen is dipped in the ink the absorbent takes up a large supply. The chief claim that this pen will have upon popular use is in its non-corroborable qualities.

THE "NESTHILL" BALL INFLATOR.

A CONVENIENT outfit for the repairer or the devotee of tennis this little outfit has proved. Any novice can use it with most satisfactory result, and the shortest possible time is required in

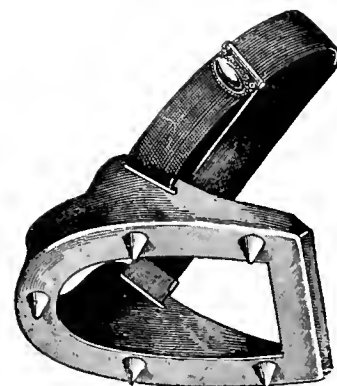
which to inflate a ball that has become soft after long usage. The outfit consists of an inflator which is in the form of a nickel-plated air pump with a tubular needle; in addition there

is a plugging awl, with chalk, repairing rubber, and bottle for mineral naphtha. The first step to be taken when using this outfit is to find the plug of the ball, and this is really the one difficult thing to do. Especially in the case of tennis balls the

plug is not easily discernible, and when this is the case the process is hastened by putting the ball in water, when the weight of the plug makes the ball float with the plug at the bottom. After this is found it should be pierced by the needle point of the inflator which has been previously dipped in the liquid naphtha. With a stroke or two of the pump the ball is sufficiently inflated, and the needle is withdrawn, the finger being placed for a moment over the aperture thus made that the air may not escape. The naphtha left by the needle in the puncture causes the edges to adhere, but in order to make a permanent seal a tiny piece of the repairing rubber about as large as the head of a pin is dipped into the naphtha and pressed into the hole on the blunt side of the awl. And this is the whole story. [Ernest H. Hill, Limited, 56, Broomhall street, Sheffield, England.]

GILBERT'S ICE CREEPER.

THE accompanying illustration shows one of the most practical of devices in its line. As can be seen, it is simple to a degree and can be very quickly put on or off. Further than that, it is virtually indestructible. The very easy adjustment may serve to make this ice creeper more popular than ice creepers have heretofore been, for the added safety it gives is a factor to be considered. The fact that it can be worn and adjusted with equal facility over leather shoes or rubbers gives it additional prestige. This article is patented. [The E. T. Gilbert Manufacturing Co., Rochester, New York.]



GILBERT'S ICE CREEPER.

SHAVADE RUBBER.

A SIMPLE little device for a shaving outfit made of rubber and fits the handle of an ordinary shaving brush, or it can be procured with its own handle. In using it one simply applies the lather and rubs it in with the Shavade. This can be done more quickly and effectually, it is claimed, than with the hand, and at the same time the face is thoroughly massaged. The result of the massage thus afforded is to open the pores, soften the beard, and make possible a smoother shave than otherwise. The Shavade is not of necessity confined to the shaving outfit, for it can be used with equally beneficial results for massaging purposes for ladies. A patent has been applied for by the Sampson Appliance Co., No. 149 Church street, New York.



SHAVADE.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED OCTOBER 1, 1907.

- N**O. 867,247. Vaginal syringe. W. G. Cronkright, Pittsburgh, Pa.
 867,265. Hose rack. T. W. Forster, Hackensack, N. J.
 867,299. Check valve. A. J. Pfleger, assignor of one-third each to C. Boetcher and E. H. Kloehn, all of Brillion, Wis.
 867,445. Syringe. J. H. Thayer, assignor to E. Hilken, both of Chicago.
 867,464. Pneumatic sleeping bag. T. A. Abbott, assignor of one-half to Metropolitan Air Goods Co., both of Reading, Mass.
 867,474. Device for inflating tires. R. H. Campbell, assignor to Aerators, Ltd., both of Edmonton, England.
 867,515. Tire protecting device. L. H. Kinnard, assignor of one-half to R. S. Chamberlin, both of Harrisburg, Pa.
 867,552. Means for fastening tires to wheel rims. A. N. Bradford, Sterling, and W. H. Holden, Rock Falls, Ill., assignors to Russell Burdull & Ward Bolt and Nut Co., Port Chester, N. Y.

Trade Marks.

- 25,525. The Faultless Rubber Co., Akron, Ohio. White shield on the surface of which is a calla lily and over this, partially covering it, a letter *F* on a black background. The word *Faultless* appears over the shield. For balloons, balls, and bladders.
 25,526. *Same*. The above design, for air pillows and cushions, bath caps, finger cots, gloves, mats, mittens, sheeting, sleeves, soap trays, sponges, sponge rubber, test tube caps, etc.
 25,527. *Same*. The above design for druggists' sundries.

ISSUED OCTOBER 8, 1907.

- 867,588. Rim and tire construction for vehicle wheels. M. P. Morrison, Atlanta, Ga.
 867,600. Vehicle tire. A. D. Ray, Cleveland, Ohio.
 867,614. Wheel [with solid tire]. B. C. Seaton, St. Louis.
 867,616. Pump [for inflating tires]. S. G. Skinner, Chicago.
 867,637. Process of making flooring and the flooring itself. [Rubber tiling.] G. H. Bennett, New York city.
 867,710. Wheel [with rubber tire]. W. Eichers, Minneapolis, Minn.
 867,717. Tire covering. G. R. Eukers and R. H. Atcheson, Chicago, Mass.
 867,722. Washboard [faced with rubber]. G. C. Haysler, Clinton, Mo.
 867,737. Hard rubber substitute and process for making the same. C. Marter, London, England.
 867,752. Pipe or hose coupling. J. H. Phillips, Jr., Jackson, Mich.
 867,756. Elastic tire. J. W. Rock, Akron, Ohio.
 867,827. Inhaler. J. H. McCulloch, Newville, Pa.
 867,830. Dress shield. Margaret H. McMann, New York city.
 867,851. Automobile tire. G. C. Sullivan, Buffalo, N. Y.
 867,882. Rubber overshoe. [Described in THE INDIA RUBBER WORLD, November 1, 1907—page 56.] F. C. Hood, Boston.

Trade Marks.

- 28,692. Dunham Brothers, Brattleboro, Vt. The word *Hunkety*. For rubber heels.
 29,253. E. Faber, New York city. The word *Comet*. For rubber erasers.

ISSUED OCTOBER 15, 1907.

- 867,966. Marine life saving apparatus. C. Fuchs, Meiringen, Switzerland.
 867,988. Armor for tires. C. P. Mays, Washington, D. C.
 868,047. Vehicle wheel. [An inner and an outer wheel, having a rubber tire between.] G. S. Whiteley, Baltimore, Md.
 868,054. Cushion heel. J. Witkowski, San Diego, Cal.
 868,079. Tire for wheels. H. B. Ewbank, Jr., assignor to H. A. Taylor, both of New York city.
 868,135. Overshoe. S. Schwarzschild, Rochester, N. Y.
 868,136. Packing [with elastic core]. J. W. Shields, Hubbell, Mich.
 868,200. Door stop. O. T. Lucas, Needlesha, Kans.
 868,207. Resilient tired wheel for automobiles and other vehicles. A. C. Montfort, Providence, R. I.
 868,210. Cushion tire. W. D. McNaull, Toledo, Ohio.
 868,242. Puncture closer. D. Apstein, Bridgeport, Conn.
 868,243. Puncture closer. *Same*.
 868,311. Hose coupling. C. T. White, Niles, Mich.
 868,450. Nozzle for vaginal syringe. S. L. Kistler, Los Angeles, Cal.
 868,480. Tattle's dummy. J. Ramb, Berlin, Germany.
 868,484. Composite boot and shoe. H. C. Richardson, Haverhill, Mass.
 868,522. Massage implement. A. Barker, Philadelphia.
 868,532. Rotary operating member for boot and shoe finishing machines [having sponge rubber cushions]. W. W. Crooker, Lynn, Mass.
 868,567. Holder for overshoes. N. P. Jensen, Ephraim, Utah.
 868,611. Vehicle wheel. W. J. Mitchell, Pittsfield, N. H., and J. R. Mitchell, Templeton, Mass., assignors to Mitchell Punctureless Tire Co., Swampscott, Mass.

Trade Marks.

- 22,675. The B. F. Goodrich Co., Akron, Ohio. The initial *G* within wreath. For druggists' sundries.
 The Hartford Rubber Works Co., Hartford, Conn. The following for marking the kind of goods specified:
 26,459. No. 50. Rubber wheel tires.
 26,460. No. 50-T. T. Rubber wheel tires.
 26,461. No. 70. Rubber wheel tires.
 26,462. No. 75. Rubber wheel tires.
 26,464. No. 77-H. Rubber wheel tires.
 26,465. No. 77-E-H. Rubber wheel tires.
 26,466. No. 80. Rubber wheel tires.
 26,468. No. 80-F-H. Rubber wheel tires.
 26,470. The word *Thorn*. Rubber wheel tires.
 26,472. A winged tire. Rubber wheel tires.
 27,320. The H. O. Canfield Co., Bridgeport, Conn. The word *Canfield* describing a half circle. For rubber valve balls, rubber bulbs, rubber furniture bumpers and other mechanical goods.
 29,427. Bourn Rubber Co., Providence, R. I. A circle enclosing the words *Pine Knot*. For rubber boots and shoes.
 29,737. The Mona Mfg. Co., Boston. The word *Mona*. For dress shields.

ISSUED OCTOBER 22, 1907.

- 868,668. Process of making hollow rubber articles having seams. I. F. Kepler, assignor to The B. F. Goodrich Co., both of Akron, Ohio.
 868,732. Press for vulcanizing pneumatic tires. A. E. Vincent, Noisy-le-Sec, France.
 868,614. Cork for stopping bottles. H. W. Dawson, Portalegre, Portugal.
 869,069. Apparatus for testing miners' safety lamps. E. C. Davies, Taylor, Pa.
 869,177. Waterproof garment. B. C. Hathaway, Boulder, Ill.
 869,190. Swimming appliance. C. H. Matter, Pittsburg, Pa.
 869,191. Dental plate. G. W. Moran, Salem, Va.
 869,193. Flexible wheel for motor vehicles. H. F. Nichols, Adelaide, South Australia.

Trade Marks.

- 29,537. Hood Rubber Co., Boston. The picture of an arrow tip. For rubber footwear and rubber tires.

ISSUED OCTOBER 29, 1907.

- 869,262. Aspirator. E. Pynchon, Chicago, assignor to The De Vilbiss Mfg. Co., Toledo, Ohio.
 869,321. Insulating material and method of manufacturing. R. Müller, Munich, Germany.
 869,618. Artificial rubber. W. H. Brownlow, Brockville, Ontario.
 869,642. Hoof expanding pad. C. D. McAfee, Burgettstown, Pa.
 869,662. Hose coupling. C. E. Snyder, assignor of one-eighth to J. P. Murray, both of Allegheny, Pa.
 869,764. Heel for boots and shoes. [See THE INDIA RUBBER WORLD, July 1, 1907 page 318.] W. G. Anderson, assignor to N. S. Anderson, trustee, both of Brookline, Mass.
 869,838. Horseshoe. G. M. Green, Denver, Col., assignor of one-half to W. T. Green, Tampa, Fla.

Trade Marks.

- 24,410. Consolidated Rubber Co., Trenton, N. J. Floral design. For rubber fruit jar rings.
 28,064. Morgan & Wright, Detroit, Mich. The word *Atlas* in semi-circle. For rubber hoof pads.
 29,062. The Fairbanks Co., New York city. Red disk bearing the words *Fairbanks Friction Brand*. For rubber belting.
 29,112. The M. Lindsay Rubber Mfg. Co., New York and Washington. Likeness of Charles Goodyear with fac simile signature. For druggists' sundries.
 29,183. Pacific Coast Rubber Co., Seattle, Wash. Light and heavy circle enclosing the word *Eureka*. For rubber footwear.
 29,184. *Same*. Light and heavy circle enclosing the word *Ribano*. For rubber footwear, gloves, etc.
 29,399. Morgan & Wright, Detroit, Mich. Two circles in double outline enclosing the firm monogram. For rubber hose, packing gaskets, etc.
 29,407. Fabric Fire Hose Co., Sandy Hook, Conn. Shield and arrow; shield bearing the words *Fabric Fire Hose Co.* on twisted hose, the whole enclosing a tiger's head. On the bottom of the shield the words *New York*. For rubber hose and fabric hose.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, SEPTEMBER 25, 1907.]

- 12,454 (1906). Process of reclaiming or repairing old rubber and altering in shape newly manufactured rubber. T. Gare, New Brighton.
- *12,501 (1906). Single tube pneumatic tire. J. A. Swinehart, Akron, Ohio.
- *12,527 (1906). Process for reclaiming waste rubber. A. J. Boulton, Hatton Garden, London. (W. A. Koneman, Chicago, Illinois.)
- *12,526 (1906). Process for reclaiming waste rubber. *Same*.
- *12,527 (1906). Process for reclaiming waste rubber. *Same*.
- 12,550 (1906). Noiseless heels for clogs. R. Binnall, Rochdale.
- 12,593 (1906). Means for connecting inflator to a tire valve. S. F. Nichols, Blackheath.
- 12,631 (1906). Non-slipping pneumatic tire. W. S. Smith, Middlesex, and W. H. Edwards, Walthamstow, Essex.
- *12,633 (1906). Hard rubber pen. J. Schuchmann, Chicago, Illinois.
- 12,751 (1906). Non-skid cover for pneumatic tires. K. P. Houston, London.
- 12,781 (1906). Non-skid studs for pneumatic tire treads. W. Eatwell, London.
- *12,808 (1906). Spring wheel with rubber tread band. E. B. Sims, Western, Nebraska.
- 12,854 (1906). Felloe with attachable flanges for elastic tires. J. May, Glasgow.
- 12,869. Toy. A. Forbes, Leeds.
- 12,912 (1906). Spring wheel with resilient hub embracing rubber. A. E. J. Smith, Battersea, London.
- 12,927 (1906). Inflating apparatus for life belts. C. Fuchs, Meiringen, Switzerland.
- 12,963 (1906). Rollers for textile manufactures. F. Reddaway, Pendleton, Manchester.
- *13,045 (1906). Pipe joint, involving the use of vulcabeston. E. E. Gold, New York city.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL OCTOBER 2, 1907.]
- 13,088 (1906). Golf ball [with rubber core inflated with air]. R. McGarva, Shandon, Dumbartonshire.
- 13,171 (1906). Pneumatic tire, with protective tread. O. Tailfer, Alexandria, Ontario, Canada.
- 13,282 (1906). Pneumatic tire with emergency air tubes. H. B. Vinten, Ramsgate, Kent.
- 13,323 (1906). Spring wheel with solid rubber tire. J. and W. Horton, both of Woodside Iron Works, Salterhebble, near Halifax.
- 13,328 (1906). Mandrel for forming rubber nipples for nursing bottles. F. W. Ingram and A. Shepard, both of Forest Gate, Essex.
- 13,459 (1906). Bathing cap. M. Annenberg, Islington, Middlesex.
- *13,478 (1906). Solid rubber tire. A. J. Boulton, Hatton Garden, London. (J. A. Swinehart, Akron, Ohio.)
- *13,493 (1906). Apparatus for the steam vulcanization of tire covers. E. Hopkinson, New York, and T. Midgley, Hartford, Connecticut.
- 13,571 (1906). Gas engine fitted with reciprocating pump for inflating rubber tires. L. Serne, E. E. Pither and R. E. Pither, all of London.
- 13,611 (1906). Spring wheel with elastic tire. F. Andrews, Southend-on-Sea.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 9, 1907.]
- 13,672 (1906). Tire having the ordinary air tube replaced by a series of helical springs. G. H. C. Allié, Paris, France.
- 13,702 (1906). Tire of helical springs enclosed in a rubber envelope. J. P. Holdinott, Aston Somerville, Gloucestershire.
- 13,707 (1906). Single or multiple solid tires and rim with special flanges. W. B. Hartridge, London.
- 13,746 (1906). Folding bath. A. W. Gamage, London.
- 13,789 (1906). Air pump for motor vehicles. H. M. Domccq-Cazaux, Paris, France.
- 13,913 (1906). Fibrous or elastic sheets for matting. C. Wissenbach, Frankfurt-on-Main, Germany.
- *14,021 (1906). Pneumatic tire with supplementary air tube. H. S. Rodgers, Cincinnati, Ohio, and J. D. Prince, New York city.
- *14,022 (1906). Pneumatic tire cover with flat tread. *Same*.
- 14,154. Pneumatic tire. A. Gerlach and Continental Caoutchouc und Guttaperecha Cie., Hanover, Germany.
- 14,241 (1906). Toy. [Diabolo.] G. Philippart, Paris, France.
- 14,257 (1906). India-rubber valves. O. Lindemann, London. (Communicated from Germany.)
- 14,284 (1906). Golf ball. F. W. Mottershaw and C. Macintosh & Co., Ltd., both of Manchester.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 16, 1907.]
- 14,314 (1906). Corrugated wrappers for packing bottles. F. M. T. Amherst, Diddington Hall, Norfolk.
- 14,328 (1906). Spring wheel with solid rubber tire. J. Slee, Newton-le-Willows, Lancashire.
- 14,338 (1906). Tire formed of a core wrapped with elastic cords and a cover. C. King, Brentford.

- 14,351 (1906). Friction clutch, lined with elastic friction material. H. Baumgartner, Mica, Basel, Switzerland.
- 14,354 (1906). Device for indicating the presence of stones or other bodies on tires. C. C. Regnart, London.
- *14,372 (1906). Pneumatic tire with anti-skidding cover. L. Slama, Humboldt, Nebraska.
- 14,395 (1906). Substitute for ebonite. C. Marter, London.
- 14,417 (1906). Hose reel. W. H. Freeman, Small Heath, Birmingham.
- 14,431 (1906). Spray producer. R. F. Venner, Westminster, and A. W. Brown, London.
- 14,551 (1906). Solid rubber tire with protector plates. W. T. Smith, Bolton.
- 14,610 (1906). Horsehair fabrics treated with rubber solution. T. Ehninger and R. Panke, Kirchheim unter Teck, Germany.
- *14,621 (1906). Rubber type. W. H. Wheatley, London. (L. R. Blackmore, Arlington, New Jersey.)
- *14,624 (1906). Machine for vulcanizing rubber boots and shoes. M. C. Clark, Providence, Rhode Island.
- 14,645 (1906). Solid rubber tire with canvas or metal insertion. C. Challiner, Manchester.
- 14,698 (1906). Inhaler or vaporizer. Dresden, Germany.
- 14,802 (1906). Tire having leather tread and rubber or metal springs. H. E. Walters and W. H. Woodstock, Westminster, Middlesex.
- 14,802A (1906). Tire tread. *Same*.
- 14,848 (1906). Detachable rim for pneumatic tires. J. Burnam, London.
- 14,883 (1906). Hot water bag. Leyland & Birmingham Rubber Co., Leyland, near Preston, and W. Timperley, Leyland.
- 14,896 (1906). Apparatus for waterproofing fabrics. A. E. Vincent, Paris, France.
- *14,930 (1906). Spring wheel having the body and rim portions spaced by rubber blocks. I. W. Giles, New Bedford, and C. W. Tobey, Fairhaven, both in Massachusetts.
- 14,954 (1906). Spring wheel with metal tread supported on rubber cushions. S. J. Williams, London.
- *14,966 (1906). Vaginal syringe. J. J. Brin, Chicago, Illinois.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 23, 1907.]
- 14,983 (1906). Revolving heel protectors. F. W. Farr and Vertex, Ltd., Cogenhoe, Northampton.
- 15,000 (1906). Elastic tire of springs and rubber. G. Monnig, Berlin, Germany.
- *15,018 (1906). Cushion tire. E. Kempshall, Boston, Massachusetts.
- 15,040A (1906). Puncture repair press. D. W. Freeman, Finningley, and W. Pennington, Bawtry, both in Yorkshire.
- 15,054 (1906). Protective cover for pneumatic tires. V. P. Khan Kitabgi, Surbiton, Surrey.
- *15,062 (1906). Rubber compounds. F. M. Ekert and C. C. Hooven, both in Dayton, Ohio.
- 15,080 (1906). Bulb for filling pens. W. Smith, Brecon.
- 15,280 (1906). Tire inflator. B. M. Drake and J. M. Gorham, London.

THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 375,354 (Mar. 4, 1907). Magnin et Leborne. Pneumatic harness pads.
- 375,428 (Mar. 6). P. E. Doolittle. Pneumatic tire.
- 375,442 (Mar. 7). Rippert et Schmitt. Device for fastening tires.
- 375,508 (Feb. 18). Bernot y Ballart. Pneumatic cushion.
- 375,551 (Mar. 9). Société des Fabriques Russes Francaises "Prowodnick." Antiskid tire protector.
- 375,568 (Mar. 9). G. G. Eranney. Spring wheel.
- 375,600 (Mar. 11). J. Dorange et P. Buchillet. Antiskid tire.
- 375,617 (Mar. 12). Société Hollandsche Maatschappij tot Hetmaker van Werken in Gewapend Beton. Process for recovering cables.
- 375,657 (Mar. 13). Société Leger et Lailloult. Removable rim.
- 375,717 (Mar. 14). F. J. Harden. Tire improvement.
- 375,547 (Mar. 9). G. Bieron. Reclaiming rubber.
- 375,643 (Mar. 13). H. Eubenheim. Rubber drying process and apparatus.
- 375,678 (Mar. 13). Harvey Frost & Co., Ltd. Vulcanizer.
- 375,799 (Mar. 15). J. Slée. Elastic tire.
- 375,709 (May 21, 1906). Rouxville. Reclaiming rubber.
- 375,865 (Mar. 18, 1907). A. Lombardy. Elastic tire.
- 375,803 (Mar. 10). A. A. Marchet. Pneumatic tire.
- 375,920 (Mar. 20). Société Atretos. Pneumatic tire.
- 376,010 (Feb. 20). F. Conte. Antiskid tire protector.
- 376,153 (Mar. 27). H. Boulanger. Antiskid tire.
- 376,161 (Mar. 27). E. Martin. Antiskid tire.
- 376,180 (Mar. 28). Drury et Medhurst. Improvement in tires.
- 376,254 (Mar. 18). Marmont. Spring wheel.
- 376,345 (Apr. 3). J. Borderel. Removable rim.
- 376,507 (Apr. 6). A. Manson. Fastening pneumatic tires.
- 375,799 (Mar. 15). J. Slée. Elastic tire.
- 376,258 (Apr. 8). L. Babert. Antiskid tire.
- 376,530 (Apr. 8). A. Rickli. Removable rim.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

Rubber Shoes in Interstate Commerce.

A RECENT decision in one of the federal courts, growing out of litigation between two firms in the rubber trade, is likely to have an important bearing upon the question of the rights of a corporation under the laws of one state to engage in trade in other states. Briefly, the case is this: The United States Rubber Co., a corporation of New Jersey, consigned large supplies of rubber footwear to The Butler Brothers Shoe Co., a corporation of Colorado, at Denver, and later brought suit under its contract to secure payment for the goods. In the United States circuit court at Denver a decree was entered in favor of the United States Rubber Co., ordering the payment by the defendants of \$52,779.83. The case was carried by the latter to the United States circuit court of appeals, and had a hearing at St. Paul, where, on October 25, an opinion (by Circuit Judge Sanborn) was filed, confirming the decree of the circuit court.

The chief objection of the defendants in the original case to the decree of the court was that the contracts upon which the United States Rubber Co. sued were illegal, and therefore void, because the complainant was a foreign corporation and it carried on business in the state of Colorado without a license, in violation of the statutes of the state. The constitution and laws of Colorado—and of many other states as well—prohibit any foreign corporation from doing any business, acquiring or holding any property, or prosecuting or defending any suit in the state, unless it has first filed certain papers with and paid certain fees to the state authorities, and named an agent within the state who can sue or be sued. These regulations the United States Rubber Co. had not complied with, which fact was relied upon by the defendants to estop any action at law by the rubber company. Further, the counsel for the Denver firm argued that the rubber company had an adequate remedy at law in the state courts, and denied the right of the company to resort to the federal courts.

The decision of the circuit court of appeals, which is voluminous, reviews the questions above stated in great detail, reviewing many former decisions by the United States circuit courts and by the supreme court that are pertinent to the case.

An early decision by the supreme court was that a state might exclude the corporation of another state from its jurisdiction, or regulate its admission, and that corporations are not within the clause of the constitution of the United States which declares that "the citizens of each state shall be entitled to all privileges and immunities of citizens in the several states." But the broad statement that a state may restrict the action of foreign corporations has been qualified by many later decisions, as new questions have arisen from time to time, with the result that Judge Sanborn holds in the decision here under review:

"Every corporation empowered by the state of its creation to engage in interstate commerce may carry on that commerce in sound and recognized articles of commerce in every other state in the Union. Every prohibition, obstruction or burden which the other states attempt to impose upon such business is unconstitutional and void."

The principle involved is, in brief, that whereas every state may regulate business carried on wholly within its own borders as it may see fit, commerce carried on between citizens (or corporations) of two or more states is interstate commerce, and as such is subject to regulation only by congress, as provided in the constitution of the United States. The constitution of the United States and the acts of congress in pursuance thereof being the supreme law of the land, Judge Sanborn held that the constitution and laws of Colorado should be read in the light of this fact, and that the real intention of the Colorado

statutes was to apply only to corporations and their act, which did not engage in or constitute interstate commerce. A large part of the decision, therefore, was devoted to defining interstate commerce.

Judge Sanborn also held that any corporation in any state has the right to bring or defend suits in the federal courts and to remove suits to them from the state courts, but this point will not be further noticed here.

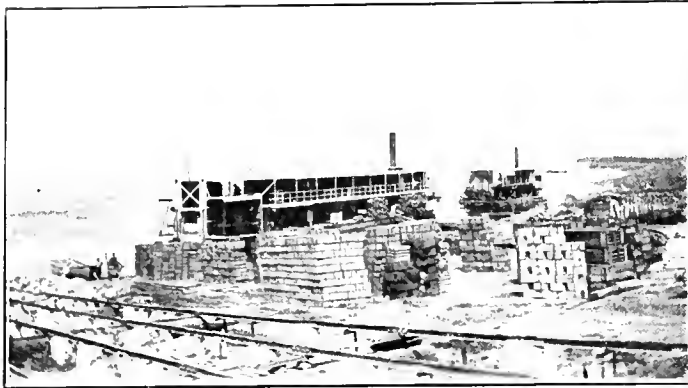
In holding that the United States Rubber Co., in the Colorado case, was engaged in interstate commerce, and not merely carrying on business within that state, the decision reads:

"Let us now turn to the contracts, observe what the Rubber Company agreed to do and what it actually did under them, and determine, if possible, whether or not in making, or in performing these agreements it was guilty of doing any business within the meaning of the constitution and statutes of Colorado. It agreed to ship the goods from its warehouse, or its mill, upon the orders of the appellee, to that Company in Denver, and it did so. It contracted to do, and it did nothing more. It never had any office or place of business in Colorado; it never received, stored, handled or sold any goods, or collected any money for the sales of any goods in that state under this contract. It never incurred, assumed or paid any expenses of doing all these things, or of conducting any of the business. The Shoe Company had and maintained a place of business in Colorado, it rented or owned the place in which the business in Colorado was done, and it agreed to bear all the expenses and losses of receiving, storing and selling the goods and it did so. The purchasers of the goods were purchasers from it, solicited and secured by it. They were its customers and liable to it for the purchase price of the goods. The goods were billed to them in the name of the Shoe Company as consignee. The profits of the business and the work of the business, the labor of receiving, storing and selling the goods were the Shoe Company's. The profits constituted its factorage, its compensation for carrying on the business.

"There is no question here between the state and the Shoe Company, or between the Shoe Company and the purchasers of the goods, or between the Rubber Company and the purchasers of the goods. The question here is between the consignor and the factor, and it is whether the consignor, which did not agree to do, and did not, in fact, do the business of receiving, storing and selling these goods, or the factor who did contract to do and did actually do the business of receiving, storing and selling these goods, in Colorado, and who received the factorage therefore, was doing that business. In a simple transaction the true answer seems clear. A farmer sends to a commission merchant in a city a dozen barrels of apples for him to sell. The factor puts them in his store, sells them, receives the proceeds and remits them less his factorage. The farmer from time to time sends a thousand barrels during the season, and they are sold and the proceeds are remitted in the same way. The farmer is not carrying on the business of selling apples in the city, but the factor is. The transaction in hand is larger, but in every element which conditions its legal character and effect it is not different. The transaction between the parties to this suit was interstate commerce. The Rubber Company did not agree to do, and did not actually do, any business of receiving, storing and selling the goods in Colorado. The Shoe Company did agree to do, and did so, that business. These facts have driven our minds with compelling force to the conclusion that within the true intent and meaning of the constitution and statutes of Colorado the Rubber Company was not doing business in that state and the contracts between these litigants are valid and enforceable."

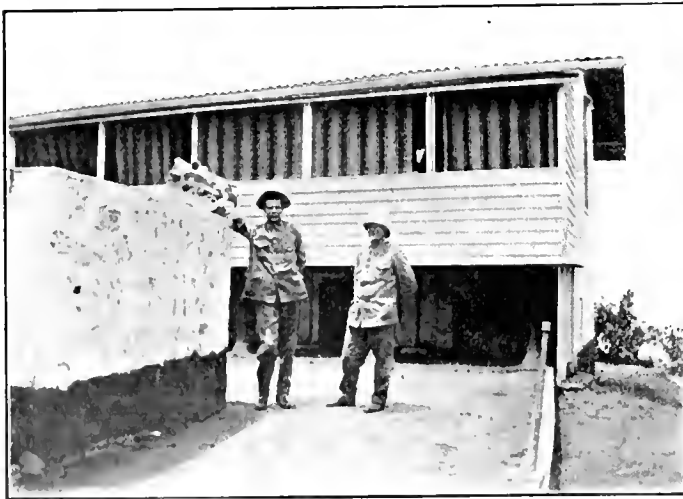
VIEWS ON THE CONGO.

ONE of the illustrations on this page is a view at Citas station Stanley Pool, on the Congo river—the point where rubber coming downstream has to be transferred, on account of the cataracts, to the Congo railway, by which it is conveyed 200 miles toward the Atlantic to Matadi, where it goes aboard steamers for Europe. The picture shows an upper Congo boat and its



CONGO STEAMERS AND CARGO AT CITAS

cargo just unloaded. As has been mentioned before in THE INDIA RUBBER WORLD, most of the trading companies up the Congo are represented, in the transfer of the rubber at Stanley Pool, by Compagnie Industrielle et des Transports on Stanley Pool "Citas," the direction of which is in the hands of Captain Vitta, in Africa, and Monsieur E. Hinck, in Brussels. Monsieur Hinck also belongs to the administrative department of the Congo railway, and is a director in the American Congo Co., the company formed in New York last year to work a rubber concession on the river Kassai.



ANOTHER VIEW AT CITAS.

[Showing Mr. S. P. Verner (on the right) and Mr. E. M. Cravath.]

The second illustration, also a view at Citas, shows two gentlemen connected with the American Congo Co.—Mr. Samuel Phillips Verner, general manager (on the right), and Mr. Erasmus M. Cravath. Mr. Verner is in charge of the preliminary exploration work of the American Congo Co. in the interior, a region with which he has long been familiar. He had twelve years' business experience in the Congo Free State and was special commissioner of the country to the St. Louis exposition in 1904.

A copy of the Index to Mr. Pearson's "Crude Rubber and Compounding Ingredients" will be sent free by mail.

THE CONDITION OF TRADE.

IT is asserted generally in the rubber trade that up to October last the volume of business was large and the demand good. One of the largest concerns in the country reports sales for the first ten months of this year 24 per cent. larger than for the same months of 1906; another and still larger company reports business for the current fiscal year, to November 9, at 11 per cent. larger, and so on. Collections likewise were satisfactory. There have been indications visible for some time past, however, of lighter buying in certain large channels, though one important company in the field of railway supplies reports a larger trade in that line in October than in the same month last year. This was attributed to the railway companies involved having postponed buying until replenishing their supplies had become a necessity.

The suspension of certain New York banks—not due, by the way, to any evidence of their not being solvent—was followed by a stringency of currency throughout the country, to relieve which the government has resorted to every means within its power, and millions of gold have been imported. The effects of the stringency have not all disappeared, however, and the leading centers report continued delays in making collections from country districts. In city and country alike, for that matter, the disposition is to hold real money as long as possible. Checks to a very large extent have been accepted by banks only "for collection."

As a member of the trade expresses it: "We hear all the time that the farmers have plenty of money, and are prosperous, but they take good care to hold on to it. But when they have anything to sell, they always demand spot cash." Another rubber man said that much of the recent trouble seemed due to a popular ignorance of banking. People expected interest on their bank deposits, and then were surprised if they couldn't draw out their money on a minute's notice.

A leading manufacturing corporation early in October, before the recent "panic" began, sent out instructions to all its factories to retrench in every expense possible and to reduce the working force. In two of the factories, later, it became necessary to recall some of the men on account of the receipt of important orders. To-day those factories are working only on orders.

Some of the rubber shoe factories have been closed, and not all of them for a definite time. An official of one of the companies said: "We have made and shipped to date more rubber shoes than in the same months of any former year, but they have all been on 'detailed' orders. Ordinarily we should keep at work adding goods to stock, and in all probability should sell the goods before the season closes, but on account of the financial situation just now we do not deem this wise. The date of resumption of work will depend upon how further orders come in."

"Business is good," said a mechanical goods manufacturer. "That is, it has been good. There was nothing the matter with the country, nothing the matter with business, money was plentiful. But this scare has come on, all without reason, and it will take a good while for business to reach its old level again."

The fact that crude rubber prices have fallen lately below any quotations for several years past does not necessarily imply that the cost of rubber goods will decline to a corresponding extent—at least for some time to come. While rubber may be bought in open market for less money than formerly, every steamer arriving from rubber ports is carrying rubber contracted for in advance at higher than current quotations. Besides, manufacturers are understood generally to be well supplied with rubber bought at the prices prevailing two or three months ago, or earlier. Naturally this rubber must be disposed of before factories can take into account, in making up cost lists, the prices now quoted for rubber in open market. It is estimated in the trade that little rubber reaches the actual consumer in the

form of manufactured goods within a month of the arrival of the raw material in port. Many of the larger manufacturers have rubber in store for several months ahead, and goods when made up may be kept in stock for months, and even for years, before coming into actual use. It is plain, therefore, that there can be no close relation between the price of raw material at any given period and the prices of manufactured goods.

STANDARIZING FIRE HOSE FITTINGS.

PROGRESS continues to be made toward the adoption, in American cities, of standard hose and hydrant couplings, as a part of the fire fighting equipment. There has been a lack of support, however, in some quarters where the special committee of the National Fire Protection Association having this work in charge supposed that the movement would have the earnest support of city officials. Thus in Baltimore, where the last great fire was fought at a disadvantage because not all the equipment sent from neighboring cities could be used, on account of the lack of uniformity of couplings, a large number of new hydrants have since been set, but the National standard has not been adopted. Nor has Toronto, which similarly suffered not long ago from the lack of uniform couplings, seen fit as yet to adopt the new system.

A New York journal, *Insurance Engineering*, has lately compiled some facts bearing upon the subject of hose and hydrant couplings, based upon reports from 75 American cities, in 22 of which the National standard has been adopted. In 14 of these cities the adoption occurred within the past year. For the most part the cities which have adopted the new standard are small, though Chicago and St. Louis have been added to the list within the period covered by the report. In 15 cities using the National standard, 2,635 new hydrants were set during the year, while in 33 other cities 5,425 new hydrants were set, showing that the tendency is not all in the direction of uniformity. The National standard has not been adopted in New York, in which city, including Brooklyn, 3,074 new hydrants were set in the year.

The movement for standardization in the field above referred to had its inception as early as 1873, and uniformity of fittings has since been urged constantly. Finally the National Fire Protection Association appointed a special committee on the subject, the work of which is to seek to influence the authorities of cities and towns to adopt a uniform system of sizes of fittings, screw threads, and so on. The work of the committee has received the formal support of the American Waterworks Association, the International Association of Fire Engineers, National Firemen's Association, New England Waterworks Association, National Board of Fire Underwriters, and some other bodies. The committee are hopeful, with this coöperation, of making continued headway in its work.

The committee make one point of interest in this connection: "While it is not to be assumed that all couplings and attachments for fire service which now differ from the established standard can or will be immediately discarded for that, it is possible to make the substitution gradual, easy and inexpensive by the use of adapters at all hose and hydrant couplings, until the fixed connections on the established standard gage may be made permanent on the plant already installed, while on the new hydrants and hose, standard gage should be specified as an essential to acceptance. We are reliably advised that adapters cut to the established standard gage on one side and on the other side to the present gage in use in any department, may be had at a cost of \$1 each, and can be used for either hydrant or hose couplings."

The importance of this whole subject to the rubber trade becomes more apparent with the progress of time. A year or two ago THE INDIA RUBBER WORLD obtained some opinions from this trade, which may still be pertinent. One rubber manufacturer

wrote: "We would state, first, that we have no preference for any particular thread. Second, it would make no difference to us should a standard thread be adopted."

The meaning of this statement, which voiced the sentiment of a number of other manufacturers, doubtless is that orders secured by rubber manufacturers are based upon definite specifications, and one is concerned little about the specifications sent to another factory. The letter continued, however:

"On the other hand, we should like very much to see a standard thread adopted, as it will enable us to carry couplings for fire hose in stock, which would be a great convenience, as well as prove a material saving both in time and in money."

THE TYPICAL AMERICAN MACKINTOSH.

IT is safe to say that the average traveler from abroad, asked to describe the typical American rubber coat or mackintosh, will draw his recollections most from the rubber suits worn by the tourist on the *Maid of the Mist*, at Niagara. However little of this country he may see, every foreigner takes in Niagara, and there, the chances are, gets to see more of the coats in use than he will at any one other point, unless he chance on



WATERPROOFS WORN ON THE "MAID OF THE MIST."

much rainy weather. The coats, moreover, are so distinctive as to impress themselves indelibly on the memory.

Garments for men and women, differ only, to the uninitiated, in the matter of the former having double rows of buttons down the front. The hood, too, is the same, covering the entire head, except the face, and then extending out over the neck and shoulders, like some ancient helmet. The suits recall to the novice most some fantastic *masquerade* assumed by Pythian or other orders, for one of their secret rites. FELIX J. KOCH.

"SYMME'S HOLE" RECALLED.

THE Boston *Herald* devotes a page to stating the theory of Orville Livingston Leach, of Auburn, Rhode Island, that the earth is inhabitable in the interior. The name of Mr. Leach, by the way, doubtless is familiar to many of our readers as the inventor of a bicycle tire and of a solid rubber automobile tire, but it would appear that he is no less interested in making his cosmic theory known than in developing his tires. It is not stated whether Mr. Leach is familiar with the work of John Cleves Symmes, of Kentucky, who wrote a book early in the last century to prove the globe to be hollow and habitable within its shell. Mr. Symmes never was able to organize an expedition as he desired to prove the existence of what the none too serious public called "Symmes's hole."

The Progress of Rubber Planting.

PROFITS OF AN ANTWERP COMPANY.

THE annual report of the Federated Malay States Rubber Co., Limited, for the year ended May 31, 1907, shows profits of 173,680.35 francs [= \$33,578.21, gold], against 74,003.10 francs in the preceding year. There were disbursed in dividends 122,500 francs [= \$22,842.50], amounting to 9.8 per cent. on 1,250,000 francs capital. Additions were made to the reserve fund, provision made for directors' fees, and a balance carried over of 15,043.65 francs. The rubber yield was 32,175 pounds, against 13,222½ pounds in the previous year. This rubber was derived from 12,335 trees, or an average per tree of about 2-3 pounds. Sales during the year amounted to 14,359 kilograms [= 31,590 pounds], at an average gross price of 5s. 6d. [= \$1.33¼] per pound. The headquarters of the company are in Antwerp, and the directorate includes some important members of the crude rubber trade there.

LANADRON RUBBER ESTATES, LIMITED.

THIS company was registered in London October 4, 1907, with £320,000 [= \$1,557,200] capital, to acquire the widely known and successful Lanadron estate in Johore, Malay peninsula, owned and under the management of the Messrs. Pears, of Pears' soap fame, together with adjoining properties in which the Messrs. Pears are interested. This estate has become particularly noted for having been the first to produce "block" rubber on commercial scale. "Lanadron block" has won not a few prizes, and the average price obtained for it in London during the first eight months of 1907 was about 5s. 9¼d. [= \$1.40 1-3] per pound. The amount of rubber harvested in the first seven months of the year was 55,828 pounds. By August 31 about 2746 acres had been planted with *Hevea* rubber, and it was intended to plant 600 acres more by the end of the year. The prospectus indicates that the transfer of the estate was based upon the appraisal of the rubber at different ages, running from £10 [= \$48.66] per acre for rubber under one year to £190 [= \$924.63] per acre for that 8½ years old. The jungle land is valued at £3 per acre.

TWO SHILLING PLANTING SHARES.

THE £1 shares of The Vallambrosa Rubber Co., Limited, reported on in THE INDIA RUBBER WORLD November 1, 1907 (page 8), on account of the high market value attained—lately as high £9 12s. 6d.—have been divided into 2 shilling shares, in order to facilitate transfers. The change was sanctioned at a special meeting of shareholders at Glasgow on November 6.

The £1 shares of The Selangor Rubber Co., Limited, have similarly been divided into 2 shilling shares, a late London quotation for which was 19 to 20 shillings each.

"THUMB NAIL" PRUNING OF "CASTILLOA."

IN a report on the condition of Plantation "Rubio," dated October 20, the management of The Tehmantepec Rubber Culture Co. say: "It is very noticeable that where we did thumbnail toping this spring the trees [young *Castilloa elastica* rubber] are growing stocky and thick. This is the result desired, and means they will the more quickly reach a tappable circumference. They are throwing out young, permanent branches, and therefore will soon enjoy an increased leaf surface, much to their advantage."

A similar report was issued during the past month by The Ohio Rubber Culture Co. (Canton, Ohio), whose Plantation "Capoacan," in Mexico, is near "Rubio."

MEXICAN PLANTING COMPANIES.

MEXICAN Mutual Planters' Association (Chicago) have begun harvesting coffee on their "La Junta" plantation, in Mexico, and announce that they are about to purchase machinery for handling 1,000,000 pounds per year. Their rubber plantation is stated to cover 5 square miles, and to embrace 2,000,000 *Castilloa* trees from 2½ to 6½ years old, of which 350,000 are expected to be

tappable within one or two years. The company's estimates of profits are based upon a yield of 4 ounces per tree at 8 years, increasing to 1 pound at 15 years.

Isthmus Plantation of Mexico (Milwaukee), upon their organization, placed their property in Mexico in the hands of the Chicago Title and Trust Co., in trust for the investors, until January 1, 1908. It is now arranged that the shareholders shall take over the property on the date named, preliminary to which the shareholders recently chose a what will be known as "The Shareholders' Committee of Five," to perfect plans for the coming transfer. The committee consists of William H. White, Charles B. Weil, Louis A. Rabig, Joseph Leverman, and Oscar Kasten.

The Mexican Culture Co. (Portland, Oregon) state that \$200,000 has been expended in the development of their plantation in Mexico, and they estimate their 5000 acres of land, of which 1250 are planted to rubber, to be worth to-day from \$400,000 to \$500,000.

A MEXICAN EXPERIMENT STATION.

A TROPICAL experiment station to be operated by the Mexican government in Mexico is being discussed and undoubtedly will take definite shape in the near future. The suggestion is to have it located on the *tierra caliente* and to devote particular attention to rubber. That such a station would be of great advantage if properly administered is self evident. The Mexican government may not be aware of it, but they have in their own borders the man above all others who, if he could be secured, would fill the position of curator well, and that individual is Mr. James C. Harvey. No one else in the republic of Mexico has spent as much time studying rubber as he has, and no other man in the republic possesses to an equal degree the respect and confidence of all of the other planters. Quietly and unobtrusively for years Mr. Harvey has collected plants, seeds and knowledge from botanical gardens all over the world, and he would start with an equipment for such an office that could hardly be excelled.

CENTRAL AMERICA.

THE Posoltega Rubber Estates, Limited, registered in London September 30, 1907, with £30,000 [= \$145,995] capital, is formed to acquire the Chiquimulapa rubber plantation, on the west coast of Nicaragua, including 400 acres planted by Paul R. Boyes, of Lytham, Lancashire, the recent owner, with 90,000 rubber (*Castilloa elastica*) trees, the oldest of which are 9 years. Mr. Boyes is a director in the company, and two other members of the board are interested in rubber in the Far East. Head office: Bloomfield House, 85, London wall, E. C., London.

The Compañía Belga de Centro-América (Sociedad Anónima), of Guatemala city, advise THE INDIA RUBBER WORLD that they own in Guatemala three rubber plantations, in addition to three estates in the rubber belt of that estate, by which it is presumed that the collection of native rubber is meant.

The plantation in Nicaragua of The Cukra Co. of Toronto, Limited, of which Gordon Waldron is the manager, and which is devoted primarily to rubber, is producing bananas on a commercial scale. The shipments during October amounted in value to \$1044.20, gold.

JAMAICA.

DURING the year ended March 31, 1907, the botanical gardens sold to planters on the island 23,226 rubber plants, of different species. Two consignments of Pará rubber (*Hevea*) seeds from Singapore were received during the year, from which a considerable number of plants resulted.

BRIEF MENTION.

THE Java Rubber Plantations, Limited, registered in London October 2 with £35,000 [= \$170,327.50] capital, acquires a pro-

ductive coffee estate in Java from a Dutch company. Considerable rubber (*Hevea*, *Ficus* and *Castillon*) has been planted, and this planting is to be extended.

The report of the agricultural department of French Indo-China for 1906 mentions the satisfactory growth of planted *Ficus elastica*, six year old trees measuring 8 and 9 meters [$\approx 26\frac{1}{2}$ and $29\frac{1}{2}$ feet] in height. Twenty such trees yielded, from experimental tapping, 10.2 kilograms [$\approx 22\frac{1}{2}$ pounds] of rubber, an average of about 1½ pounds per tree.

A suit was brought recently in Singapore by a broker who sought to recover his commission for assisting in the purchase, for \$7000, of a rubber plantation in Johore, which he alleged had been sold soon afterward to a Japanese syndicate for \$200,000.

Grijalva Land and Coffee Co., Limited, developing "Montezuma" plantation, in Chiapas, Mexico, have entered into a contract with A. G. Weiss to take charge of their further planting of rubber. Mr. Weiss has planted about 2000 acres to rubber on his own account, near Huimanguillo, in Tabasco state. Dividends will be paid on the Montezuma shares this year from the proceeds of sugar cane.

ANOTHER PERUVIAN RUBBER CONCESSION.

THE Peruvian Rubber Co., Limited, registered in London September 6, 1907, with a capital of £250,000 [\approx \$1,216,625], has for its object the exploitation of a concession from the Peruvian government (May 17, 1901) to Miguel Forga & Sons, and transferred to Compania Gomera Villamayo, Limitada, to construct a mule road 120 miles long from a point in the province of Sandia to the Tambopata river, which flows through the Madre de Dios into the Amazon. On the completion of this road the *concessionaires* are to receive a grant of about 650 square miles of forest land, on which there is asserted to be a great amount of rubber. The latter, when the road is open, will be capable of economical transportation either to Mollendo, on the Pacific, or down past Pará. Hecht, Levis & Kahn, crude rubber merchants, are mentioned as the London agents of the new company, and M. Forga & Sons, at Arequipa, their agents in Peru. There is now much interest in Peruvian development.

RUBBER PLANTERS OF HAWAII.

THE Hawaiian Rubber Growers' Association, consisting of a preliminary meeting held on May 22 last, completed its organization and all the formalities in connection with its charter on October 12, at the headquarters of the Nahu Rubber Co., planting concern on the island of Maui. The charter members numbering about 60 are all scrubbed, being all men of good standing in the business circles of the territory, and the hope is expressed that the new organization will in time rival the Sugar Planters' Association in the island, which it will represent. The *Pacific Commercial Advertiser* leads its report of the recent meeting "First Rubber Convention Ever Held Upon American Soil." The Nahu plantation has been mentioned already in THE INDIA RUBBER WORLD. The first trees there were planted in March, 1905, including 600 Ceara, 500 *Ficus* and 450 *C. glabra* trees. Last year 250 acres of Ceara, or more than 10,000 trees, were planted, and a similar amount this year, besides which, at least accounts, a large number of *Hevea* seeds were about to be placed in the grounds. The illustration on this page is based upon a photograph of the members of the Rubber Association at Nahu, with two year old Ceara rubber in the background. Other rubber estates in Hawaii mentioned recently are the Koolan plantation, of over 10,000 Ceara trees; the plantation of the Hawaiian-American Rubber Co., and those of W. G. Scott and F. Witrock, both private estates. The Nahu Sugar Co. have taken up rubber also, and have about 100 acres planted to date. The program of the meeting on October 12 included a paper by Dr. E. C. Waterhouse, who regards Ceara rubber as equal in quality to *Hevea* rubber, and addresses by Jared G. Smith, of United States experiment station; C. J. Austin, manager of the Hawaiian-American Rubber Co.; Jacob Kotinsky, and others. The officers elected were D. C. Lindsay, president; Dr. E. C. Waterhouse, vice president; Hugh Howell, secretary and treasurer; H. A. Baldwin and J. L. Coke, trustees. The *Advertiser* publishes a list of 64 members.



MEMBERS OF THE HAWAIIAN RUBBER GROWERS' ASSOCIATION AND PLANTED RUBBER TREES.

CONCERNING COTTON MILL HOSE.

THE great insurance companies that not only insure factory buildings against fire, but exercise a paternal interest in the manufacturers of fire extinguishing equipment, are divided into two distinct bodies—the Associated Factory Mutual Fire Insurance Companies, representing the Mutual companies, and The National Fire Protection Association, representing the stock companies. Both of these bodies have not only inspection departments, but laboratories. The Mutual inspection department, for example, has laboratories in Boston, where fire extinguishers, sprinklers, hose, and hose devices are examined and tested, and for which printed specifications are issued to manufacturers. The National Association has its main laboratory in Chicago, where work similar to that done by the Boston inspection department is carried on.

The Mutuals were first in the field in their investigation of fire hose, and the result of their recommendations has been what is known as "Underwriter's Hose," which numbers of rubber manufacturers produce and which is recommended by the Mutual companies. Hose that has not been admitted as "Underwriter's" is not recommended, although it is manufactured and sold.

The specifications of the Mutual companies cover the marking of the hose, the weave of the fabric, the weight, the general composition of the rubber lining, its jointing, cementing, number of plies in the calendering, and the thickness of the plies. There are also specifications on weight and flexibility, strength, elongation, and twist, and a manufacturers' guarantee covering all of the above points.



COTTON HOSE LABEL (FACTORY INSPECTION).

[Goods made according to the specifications of the National Board of Underwriters, and tested by the Underwriters' Laboratories are so marked.]

gation, and twist, and a manufacturers' guarantee covering all of the above points.

It is proper to say here that the Mutuals declare that since August, 1900, a period of 7 years, there has not been one piece of hose returned as faulty which was thus made under their specifications.

The National Association, which came later into the field, adopted the specifications of the Mutual companies, with only a few exceptions. For example, where the Mutual specifies 40 per cent. of Pará rubber, the National specifies 40 per cent. of pure rubber. In addition to this, there are chemical tests to determine free sulphur, combined sulphur, resins, substitutes, reclaimed rubber, mineral matter, and so on. The radical departure of the National Association from the Mutual's procedure, however, lies in their recommendation of inspection labels which they supply and which are intended to go with a factory inspection service; that is, they send an inspector to a rubber factory who takes samples of each length of hose and forwards them to the main laboratory for analysis of lining compound, of strength, tests, etc. They then select a certain number of 50 foot lengths from each lot of hose, and test it up to 200 pounds bursting pressure. If the hose passes the inspection a rubber label is put on it, each length bearing its own serial number.

As the matter now stands, most of the rubber manufacturers making the cotton mill hose have refused to accept the National's label, not that they object to factory inspection or the most searching investigation that the National Association may institute, but because they believe that if the matter is as vital as the National Association claim, and further if they pay for such inspection, that it should put upon the Association the moral obligation of not only recommending such hose as their

experts have acknowledged to be the best for fire purposes, and that they should refuse to insure risks where inferior hose is used.

It is not to be understood that there is any feeling of disagreement between the two boards of underwriters above mentioned, or between the rubber manufacturers and the National Association. The discussion is to-day largely academic and it is without doubt probable that within the near future the Mutual companies, the National Association, and the rubber manufacturers will get together on some common ground advantageous to all concerned.

THE INDIA RUBBER WORLD for November 1 contained an article on the factory inspection of insulated wire. This work is done by a special bureau affiliated with the same Underwriters' Laboratories that are mentioned in the preceding paragraphs.

STEPNEY SPARE WHEEL.

AT the first meeting of the Stepney Spare Motor Wheel, Limited, (London, October 11), a report on operations covering nine months from the date of incorporation, November 23, 1906, to August 31, 1907, showed net profits of £20,930 [= \$101,855.85], and a dividend of 20 per cent. was voted on the subscribed capital of £87,550. A branch factory has been established in Berlin, to work the German patents, under the style Stepney Auto Reserve Rad, G. b. m. H.

The Spare Motor Wheel of America, Limited, with £85,000 [= \$413,652.50] capital, was registered in London October 14, 1907, to acquire the United States patents on the Stepney spare wheel, and certain other patents relating to automobile accessories. The factory has been acquired of the St. Anne Kerosene Motor Co., at St. Anne, Illinois (about 60 miles south of Chicago). The directors are English, with the exception of Lester E. Broyles, late president of the Bradley Stillwell Co. (Kansas City, Missouri), who becomes managing director. The resident secretary in America is Ivor F. Thomas, at St. Anne.

The "spare wheel" is intended to be carried on a motor car, with the tire inflated ready for use. In case of a puncture or of other injury to one of the tires in use, the spare wheel can be attached quickly and securely alongside the wheel in trouble, without waiting to remove the latter until the tour is finished. The spare wheel is referred to as being carried as easily as a spare tire or interchangeable rim. There were recently reported to be 30,000 of these wheels in use in England alone.

A SYNTHETIC RUBBER ENTERPRISE.

THE Synthetic Rubber Co., Limited, was registered in London Sept. 25, with £100,000 [= \$488,650] capital, "to adopt an agreement with F. W. Kinyon and L. Gottschalk, and to carry on the business of manufacturers of and dealers in natural and artificial rubber, gutta-percha, balata, and similar substances, dealers in synthetic rubber, manufacturers of and dealers in articles made wholly or partly of rubber, gutta-percha, balata, and the like, including waterproof fabrics, insulating compounds, and cables, tubing, hose piping, motor and other vehicle tires, synthetic, analytic, manufacturing, and experimental chemists.

WIRE HOSE ACCIDENT.—In New York a laborer was instantly killed by an electric shock when the wire wound around a rubber hose he was carrying struck the "shoe" of a car which was in contact with the third rail by which the car was operated.

THE American Association of Commerce and Trade in Berlin gave a dinner recently in honor of the Hon. James B. Reynolds, assistant secretary of the treasury of the United States, and two members of the United States board of appraisers, the three forming the American export commission which recently visited Germany.

CRUDE RUBBER INTERESTS.

A NEW RUBBER TREE IN INDO-CHINA.

THE discovery of a new rubber tree in French Indo-China, described in the *Bulletin Economique*, is of interest not so much on account of the tree as in showing the methods of the savage gatherers and the careful consideration which the French give to all such discoveries. The new tree, which belongs to the *Ulmaceae*, is called "may ten nong" or "teo-non," and is described by Dr. Ph. Eberhardt as growing 50 feet high, the leaves being a natural sandpaper. It grows only in a small area in the uplands back of Tonkin, but is there quite abundant. The herring bone is the best tapping, and the best coagulant is sulphuric acid, though the natives usually boil the milk. The best tapping is in the fall, after the rainy season, though some tapping is done in the spring, at which time the latex contains 67.6 per cent. of rubber. Some samples, carefully prepared in the native manner, took the gold medal at the Marseilles fair, and other samples were valued at 12 to 15 francs a kilo. [The higher price equaled \$1.31 1-3 per pound.] After the discovery of this tree there was a steady increase in the output of Tonkin rubber, until the general decline in rubber prices disheartened the natives, who began adulterating the product, causing prices to fall still lower.

RUBBER IN PORTUGUESE EAST AFRICA.

THE latest report (for the year 1906) of the important Companhia de Moçambique, trading in Portuguese West Africa, and having for their base the port of Beira, is generally favorable. It is stated: "The quantity of indigenous india-rubber gathered for account of the company, which has gone on increasing since 1901, has exceeded by upwards of 25 per cent. in 1906 the quantity gathered in the previous year." The amount gathered is not given, but the report says: "The total net weight of 1906 india-rubber which we have sold on the London and Hamburg markets has amounted to 25,190 kilos [=55,418 pounds], which have yielded, at par, £12,038 12s. 6d. [= \$61,505.93]." The highest price obtained was 4s. 6¹/₂d. [= \$1.16¹/₂] per pound. Mention is made of an improvement in the quality of the rubber, with corresponding better prices. The company's report for 1904 mentioned the sale of 18,502 kilos [=40,700 pounds] of rubber, at a profit equivalent to 46³/₄ cents per pound. The latest report states that the natives are being encouraged to plant Ceara rubber.

RUBBER DIRECT FROM IQUITOS.

A DIRECT steamship service between New York and Iquitos, Peru, has been inaugurated by the Iquitos Steamship Co., Limited, for which Booth & Co., of New York, are agents. For the present the trade will be taken care of by two boats, the *Bolívar* and *Ucayali*, with sailings from New York every 40 to 45 days, the distance being about 4940 miles. A regular steamer service between Iquitos and Europe has existed for some years, so that the greater part of the rubber produced above that port has gone across the Atlantic rather than to New York, and New York shipments to the upper rubber districts have been transferred to lighters at Manãos, Brazil, and towed to their destination.

BRITISH GUIANA.

THE difficulty over the British Guiana rubber concession [See THE INDIA RUBBER WORLD, August 1, 1907—page 337] has been settled. The withdrawal of a certain suit against the governor of the colony over granting the concession asked for by the British Guiana Rubber Concession, Limited, having been filed, the concession has been granted.

Exports of balata from British Guiana from January 1 to October 30 of this year amounted to 823,940 pounds; for the same period last year, 543,651 pounds; the greatest amount for any full year in the past, 550,691 pounds.

NATAL, SOUTH AFRICA.

THE first shipment of Tongaland and Zululand rubber was dispatched from Durban for London on October 11. A large tract of rubber country is being worked under a concession

granted by the Natal government and regular shipments are expected. The quality of the rubber is said to be excellent.

CONGO FREE STATE.

THE steamer *Bruxellesville*, leaving Antwerp on October 3 for the Congo, carried 155 cases, containing 80,000 seeds of *Hevea Brasiliensis*, to be distributed among the principal rubber trading companies.

RUBBER INTERESTS IN EUROPE.

GREAT BRITAIN.

MR. FRANK REDDAWAY, J.P., chairman and managing director of F. Reddaway & Co., Limited (Manchester), on his recent birthday, which was the occasion for an outing for the employés, was presented by the latter with a handsome silver casket. The date also marked the completion of Mr. Reddaway's thirty-fifth year in connection with the company, of which he was the founder. They are makers of the "Camel's Hair" belting and mechanical rubber goods. Mr. Reddaway had just returned from Moscow, Russia, where the company for some years have maintained a branch factory, employing 800 to 1000 hands, according to the season.

W. T. Henley's Telegraph Works Co., Limited, announced, to take effect from October 24, a reduction of 10 per cent. in their list prices (dated March, 1907) for rubber covered wires and cables, the discounts to remain unchanged.

Messrs. Joseph Fynney & Co., india-rubber merchants of Liverpool, have removed from Old Hall street, where they had been located since the establishment of the firm, to a larger and more convenient suite of offices at 55, Brown's buildings, Exchange.

NORWAY.

THE exportation of rubber footwear from this country to China has begun. Such goods are exported to China also by Great Britain, Austria-Hungary and Russia.

ITALY.

TENDERS were received lately for supplying to the Italian navy rubber goods to the value of 185,200 lire [= \$35,733.60].

WANTS AND INQUIRIES.

- [447] WANTED names of makers of aluminum lasts for rubber boots and shoes.
- [448] A correspondent writes to ask who makes rubber castors.
- [449] "Would you favor us with the names and addresses of some firms who handle rubber valves of all kinds, that you could recommend as responsible parties to handle such goods for us?"
- [450] "I have a quantity of medicinal plaster leavings which contain about 20 per cent. of upriver fine Pará rubber and would like the address of waste rubber dealers likely to be interested in goods of this class."
- [451] Who makes "Rhiner" belting?
- [452] Wanted names of dealers in a very fine texture of sulphur.
- [453] Who makes rubber heels bearing a monogram the letters of which are "T. R. and E."?
- [454] Wanted names of manufacturers of a flexible metallic hose.
- [455] Who are manufacturers of chopping blocks?
- [456] Is there a machine for making rubber toy ballons, and if so, who makes it?
- [457] A correspondent asks who are the principal dealers in flour of sulphur?
- [458] Information has been requested regarding the process of Foelsing and Bögel for the extraction of rubber from various plants.
- [459] A foreign correspondent wishes to communicate with someone well acquainted with American rubber balloon manufacturers.

THE RUBBER TRADE AT SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

IN common with practically every city in the United States, San Francisco is now in the grip of the financial stringency which began lately in New York. The banks and the Clearing House Association of the city are endeavoring to avert any calamitous consequences of the tightness of the money market, and in this endeavor the governor of the state is cooperating with them by declaring a series of legal holidays from day to day. These holidays have now extended over a period of two weeks and are still continuing. As banks are not obliged to open their doors on legal holidays, they have thus been enabled to refuse the payment of gold when necessary and so conserve their strength. The Clearing House Association has issued certificates which are being circulated as currency, and the commercial life of the city is going forward, but in a restricted and cautious manner.

As far as local conditions are concerned, everything appears to be improving. The sweeping victory of the Good Government League ticket in the municipal election held on November 5 has had a reassuring effect on business generally, and as soon as the financial market in New York returns to a normal condition, everything points to an era of great prosperity on this coast.

The Morgan & Wright store established at Nos. 108-122 Tenth street, Los Angeles, under the management of Mr. F. W. Paige, is said to be one of the finest equipped west of Chicago, being finished up in Old Mission style.

The Phoenix Rubber Co., at No. 119 Beal street, report business a little more quiet than usual.

The Pennsylvania Rubber Co., at No. 512 Mission street, have nothing special to report except that business is a little quiet, owing to financial conditions.

Mr. W. Perkins, president of the Sterling Rubber Co., has just returned from the East and reports a very pleasant trip. Business, he says, has been a little slack up to the first of the month, but he thinks they are getting their share of the trade.

The Goodyear Rubber Co., at No. 573 Market street, report business very good in the fire protection line, reels and hose, and sundries applying to the holiday trade. Business in wet weather goods is a little quiet now, but as soon as the rainy season sets in, sales in that line are expected to increase greatly. Mr. George P. Moore has gone East on a business trip connected with the firm of Goodyear Rubber Co., to be gone indefinitely.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

IN regard to the rumors which have been circulated since the arrival of the present financial stringency to the effect that hundreds of men are being laid off by the larger rubber manufacturing companies here, it can be asserted that a few men have been laid off, but these, for the most part, were employed upon construction jobs which have been completed. W. A. Means, assistant treasurer of The B. F. Goodrich Co., says that plant is operating the customary full force of workmen in every department. The same company are finding some difficulty in employing a sufficient number of girls for work in the factory to keep up with their orders.

The new building at the Diamond Rubber Co.'s plant, which has been under construction for several months and which is one of the largest factory buildings in the city, is fully completed, and machinery is being installed. The wheels will begin to revolve within another month. The building is to be used for the manufacture of wire insulation and rubber specialties, and to afford more room for the tire manufacture. The mammoth structure which The B. F. Goodrich Co. have been build-

ing opposite their new office on South Main street, and which will double the amount of floor space devoted to the manufacture of tires, is also completed and occupied.

The Firestone Tire and Rubber Co., one of the most progressive of the newer rubber concerns in Akron, have taken another step toward making their plant strictly up-to-date. A restaurant has been opened upon the factory grounds for the use of the clerks, office employees, and officers.

The Mitzel Rubber Co., a concern organized in this city and since removed to Carrollton, Ohio, recently made an assignment at that place to Dr. J. R. Williams and Thomas J. Saltsman. The assets and liabilities of the company have not yet been announced, but it is claimed that the concern is a money-maker, and that it will be kept in operation by the receivers. Harvey E. Mitzel, the prime mover in the formation of the company, was formerly interested in the Pure Gum Specialty Co., of Barberton. The Mitzel concern is capitalized at \$100,000.

Fred M. Eckert, formerly of this city and now of Cleveland, has contracted with the Gutta-Percha and Rubber Manufacturing Co. of Toronto, Limited, to supply Canada with the high resistance radium packing which he has patented, and which is regarded as a coming material for bearings.

"Bill" Miller, a member of the team which represents Akron in the Interstate Roller Polo League, has secured a patent on an ingenious solid rubber device which he calls a chair tire. The tire snaps onto the rocker of a chair, and promises to be a success. One of the Akron rubber companies will take up Miller's device.

The Aluminum Flake Co., with offices in this city, have been developed to a point where their product is being shipped in large quantities to almost every corner of the world. The extensive business being carried on by the concern has made it better known, perhaps, to the rubber trade than to the general public in Akron. The people of this city are just beginning to realize the importance of this industry. Not only in rubber circles is the company's finished product used, but by paint manufacturers, in ceramic work, and in many other ways.

Mr. W. B. Miller, secretary and general manager of The Diamond Rubber Co., has purchased 12 acres opposite the building of the Portage Country Club, on which it is understood he intends soon to erect one of the handsomest residences in the county.

RUBBER TRADE IN CANADA.

THE effect of the recent financial disturbances in the States has been felt less acutely in the Canadian trade than might have been thought, considering the nearness of the two countries and the extent of international business transactions. The Canadian rubber trade generally is in good condition. The growth of the country gives rise to a growth in the demand for rubber goods. The Canadians feel that they have an advantage over their neighbors in the States in respect of a more "elastic" currency, but still the conditions south of the border are having the result of increased caution in business in the Dominion.

A NEW RUBBER SHOE COMPANY.

The Kaufman Rubber Co., Limited (Berlin, Ontario), obtained their charter on November 4. The statutory meeting of shareholders was held on the next day, when the following officers were elected:

*President, JACOB KAUFMAN.
Vice President, GEORGE RUMPEL.
Manager, A. A. VOELKER.
Secretary, A. R. KAUFMAN.*

The board of directors includes the above and August Weseloh. Four members of the board are experienced in various branches of the rubber business; while Mr. Rumpel, who is a leading shareholder and president of The Berlin Felt Boot Co., is also a valued addition to the board. He is well acquainted through his own large business with the shoe trade in Canada, and his

broad experience thus gained will be very useful for the new company. Mr. Kaufman, the president of the company, until recently sustained a similar relation to the Merchants' Rubber Co., Limited, of Berlin. Mr. Kaufman will plan to engage in manufacturing as promptly as possible.

COMPANY NOTES.

THE Imperial Rubber Co., of Montreal, Canada, have been incorporated, with \$20,000 capital. Object stated, to make rubber goods. Incorporators: D. J. Angus, F. G. Bush, and R. C. McMichael.

Jenkins Brothers, Limited, of Montreal, Canada, have recently completed an extensive factory, for the production, for the Canadian and export trade, of the extensive line of valves which forms the output of the American firm of Jenkins Brothers (New York).

The Hadley Cement Co., of Canada, Limited (Montreal), maintain agencies at Leicester, England, and Melbourne, Australia. This company, though separate from The Hadley Cement Co. (Lynn, Massachusetts), is owned by parties interested in the latter.

THE OBITUARY RECORD.

ISAAC B. HARRIS, who died at Newtown, Connecticut, on October 27, at the age of 82, was one of a long list of Americans connected at one time with the management or operation of the North British Rubber Co., Limited. Mr. Harris became connected with the rubber industry not long after the discovery of vulcanization, and was with the Goodyears at Sandy Hook, Connecticut, employed in a factory which was taken over by the New York Belting and Packing Co., upon the formation of the latter by the late John H. Cheever, in 1856. A partner in the latter concern, on account of his interest in the Goodyear patents, was William Judson, who later was one of the founders of the North British Rubber Co. It doubtless was due to Judson that, shortly after the North British company opened a mechanical goods department, Mr. Harris was placed in charge of it as superintendent. He held this position for nearly 30 years, until 1890, when he returned to the United States, after which time he resided on the farm near Newtown, where his death occurred. Mr. Harris gave personal attention to the management of his farm, being especially fond of out-of-door life. He took great interest in harness racing, and devoted much of the late years of his life to breeding fast trotting horses. Mr. Harris is survived by a widow.

* * *

HORACE B. CAMP, one of the leading citizens of Akron, Ohio, died on November 21, aged 68 years, after having been in ill health for some time to an extent that had led him to withdraw from several business enterprises with which he had been connected. Only in September last THE INDIA RUBBER WORLD, in reporting the annual meeting of the Faultless Rubber Co., mentioned the retirement of Mr. Camp from the office of president, which he had held for several years, though he accepted a reelection as director. Mr. Camp was interested in this company from its beginning at Akron, under its present name, in 1900. He was interested also in the Camp Rubber Co. (Ashland, Ohio), incorporated in 1902, and was president of both companies up to their consolidation, early in 1904, with factories at Ashland. Before becoming interested in rubber Mr. Camp had made a fortune in the clay industry, his interest in which he transferred to the National Sewer Pipe Co. He was interested also in many other important Akron enterprises—in cement, coal mining, and fireproof construction. Mr. Camp began life with no fortune, and was a notable example of the self-made man.

* * *

GEORGE HERBERT DAY, who died on November 21 at his winter home in Florida, through his great executive ability and perhaps

greater diplomacy, contributed in a very marked degree to the development of the automobile industry in America. It was his work that won about the Selden patent the important organization in the trade known as the Association of Licensed Automobile Manufacturers, resulting in cooperation and standardization of products—two great hobbies with Mr. Day. He was born in 1851 at Brooklyn, Connecticut, and as president of the Weed Sewing Machine Co. had to do with the first bicycles made in America, under contract for Colonel Albert A. Pope. This company was succeeded by the Pope Mfg. Co., of which Mr. Day became vice president and general manager. In his important relation to the bicycle and automobile industries Mr. Day, it will be seen, had an important influence in the development of the great demand for rubber in tires.

RUBBER TIRE INTERESTS.

PIRELLI TIRES ACROSS SIBERIA.

PIRELLI & CO. (Milan, Italy) issue a brochure devoted to the "Pekin-Paris Raid"—the automobile tour by Prince Borghese, between June 10 and August 10, 1907—a distance of about 16,000 kilometers [10,020 miles], or about 105.2 miles daily, on an average. *Le Matin*, of Paris, reports that when Mr. Pirelli went out to meet the Prince on his return and congratulated him upon the tour, the latter said: "It is I who must congratulate you, Mr. Pirelli; your tires are wonderful." The Prince was showing to his friends the front wheels of his "Itala" motor, which were still fitted with the same tires from Omsk (Siberia), and had therefore covered more than 7000 kilometers [4349 miles]. The Prince's car was equipped throughout only with Pirelli tires.

PNEUMATIC SULKY TIRES.

TROTTERING races had not a little to do, in the United States, at least, with attracting public attention to the pneumatic tire as a factor in speed. After the record-breaking feats of Nancy Hanks, back in 1892, people began to ask with more interest than even the bicycle had prompted, "Why is the pneumatic fast?" The trotting record has been lowered continuously since the date named above, and the pneumatic sulky tire has contributed, without doubt, to each new success. The B. F. Goodrich Co. (Akron, Ohio) have issued a brochure relating to their Palmer sulky tires, which contains, incidentally, a record of trotting scores, with a statement of the races won in 1906 on Palmer tires. The Goodrich company also make a cart tire which is heavier in construction than their standard sulky tire, especially adaptable for training sulkies and light speed wagons.

TIRE COMPANY NOTES.

THE number of Michelin automobile tires made from 1896 to the end of June, 1907, is stated to have been 1,180,830, an average of 107,348 tires per year, or enough to equip 20,837 automobiles yearly for 11 years past.

Firestone Tire and Rubber Co. (Akron, Ohio) have opened a new Philadelphia branch at No. 250 North Broad street, under the management of W. R. Walton. It is excellently located in the automobile district, and embraces a floor space of 14,350 square feet.

Two of the directors of the Continental-Caoutchouc- und Gutta-percha Compagnie, of Hanover, were in attendance at the recent automobile shows—Herr Willy Tischbein (who is also president of the Continental-Caoutchouc Co. in New York) and Dr. Albert Gerlach.

For the fourth consecutive year the Cadillac Automobile Co. (Detroit) will equip their cars with the tires of the Hartford Rubber Works Co. They also adopt for their 1908 cars the Midgley "universal" rim.

The *Malay Mail*, published in the Malay States, mentions the importation by a local firm of five motor cars, the driving wheels of which are fitted with "Continental" solid tires guaranteed for 10,000 miles.

News of the American Rubber Trade.

ATLANTIC RUBBER SHOE CO.'S AFFAIRS.

JOHAN R. HEGEMAN, of New York, some time ago sued, as a shareholder in the Atlantic Rubber Shoe Co., for the appointment of a receiver for that corporation, in the New Jersey chancery court. This motion was denied on July 11 [See THE INDIA RUBBER WORLD, August 1, 1907—page 355], but Mr Hegeman filed a new application for a receiver, which was denied by Vice Chancellor Howell, sitting at Newark, on November 8. Previous to the latest decision steps had been taken for the voluntary liquidation of the company, for which purpose the directors had been designated by the court as trustees for winding up the company's business. The court, in deciding Mr. Hegeman's case, held that the trustees had conducted the company's affairs satisfactorily, and directed them to continue in the same relation. The company's factory was sold at public auction in the latter part of 1906, and the next and final step, it is supposed, will be the sale of the patents for making rubber shoes by machinery, which formed the original basis of the company.

THE TYER COMPANY'S NEW PRESIDENT.

MR. FRED. HALL JONES, who was recently elected president of the Tyer Rubber Co., was born at Andover, Massachusetts, in 1867, and was educated in the excellent schools for which that town is famous. When he was 17 years old he went to work for the Tyer Rubber Co., working two years in the factory, and in 1889 started for them as traveling salesman. In 1889 he was placed in charge of the Boston office, and in addition had the territory of New York and Philadelphia, to look after as salesman. In 1902 he was appointed sales manager of the company, and two years later was made general manager. Mr. Jones for some years has been treasurer of the Rubber Sundries Manufacturers' Association, and is also treasurer of the New England Rubber Club. In addition to this, he is a director of the Queen City Rubber Co.,

of Buffalo, New York, director of the Andover Press (Andover, Mass.), and treasurer of the Hamilton Emery and Corundum Co. of Chester, Mass.

It is a compliment of the highest order, this election to the position of president in a company that for so many years was not only a close corporation but run on exceedingly conservative lines, and it can be taken only as a direct acknowledgment of enterprise, perseverance, and excellent business judgment. With the energetic Mr. Jones as president, the far sighted Mr. Flint as treasurer, together with a coterie of capable young men that these two have gathered around them as lieutenants, and moreover with the new enlarged factories of the company, the Tyer Rubber Co. is in a position to go very far in its special lines.

TO MAKE "CONTINENTAL" TIRES HERE.

THE Continental Caoutchouc Co., incorporated under the laws of New York State in 1903, as the American branch of the Continental-Caoutchouc- und Guttapercha-Compagnie, of Hanover, Germany, have arranged for the manufacture in America of the tires required for their trade here, instead of continuing to import them. The American made "Continental" tires are

referred to as being the same in every respect as those produced in the German factory, and are the result of careful preparation and tests that have been in progress for more than two years past. As a result of the new arrangement, it has been possible to put into effect a new American price list for Continental tires, the company now being able to avoid both the import duty and the transatlantic freight. The formal introduction upon the market of the Continental tire as an American product was made during the presence on this side of Herr Willy Tischbein and Albert Gerlach, PH. D., two of the directors of the German company. Herr Tischbein is also president of the New York Continental company, and Dr. Gerlach is an expert both as a chemist and in the tire manufacture.

Instead of erecting a new factory, the Continental people have established relations with the large mechanical goods factory of the Revere Rubber Co. (Boston), which company have had large experience in tire production, and the American Continental tires will be produced at their works at Chelsea.



FRED. HALL JONES.

[President of the Tyer Rubber Co.]

CABLE SHIP FOR AN AMERICAN COMPANY.

THE Central and South American Telegraph Co. (New York) have had built in England a cable steamer, the *Guardian*, to be employed in repair work on their lines on the west coast of South America. The steamer was equipped for its work by Johnson & Phillips, Limited, the electrical engineers, of Old Charlton and London, who manufacture a number of special devices and appliances for cable laying and repairs. The *Guardian* left London on October 5 for Callao, and will remain for three years on the Pacific coast.

APPLYING UPPERS TO RUBBER SHOES.

REPORT comes from Akron that a local inventor has designed a machine for applying uppers to rubber shoes, the apparatus now being tested out in one of the machine shops of the town. Exactly how it is done does not yet appear, but

from the description the idea would not appear to be wholly new, as one of the Western rubber shoe factories has used something of this sort with a measure of success for some time.

RUBBER RECLAIMERS' CLUB.

At the annual meeting of the Rubber Reclaimers' Club, on November 7, E. R. Solliday, of the New Jersey Rubber Co., was elected president; Joseph F. McLean, of the Pequannoc Rubber Co., was elected secretary, and F. H. Appleton, of F. H. Appleton & Son, was reelected treasurer. The executive committee consists of W. T. Rodenbach, Max Lowenthal, J. A. Lambert, J. K. Mitchell and E. R. Solliday. Mr. Rodenbach and Mr. R. W. Seabury, formerly president and secretary, respectively, were tendered a reelection, but declined in favor of other members. An official reports: "The club is a success, after having been in existence for a year. It has overcome all obstacles, and everything pertaining to the club is very harmonious."

HARD RUBBER BOWLING BALLS

THE Brunswick-Balke-Collender Co., the principal manufacturers of billiard and pool tables, together with bowling alleys

and some other lines which involve the use of a considerable amount of rubber, are building an addition to their factory at Muskegon, Michigan, to which they will remove certain departments of their business now located in Chicago. They report to *THE INDIA RUBBER WORLD*: "This will not mean any increase so far as our purchase of crude rubber is concerned. We will continue to use crude rubber the same as heretofore in some of our departments, particularly for bowling balls."

A NEW INSULATION.

THE Green Insulation Co. (Cleveland, Ohio), the incorporation of which was reported in this paper last month (page 59), will make a non-carbonizing, non-disintegrating insulation known as "Green's Q. A. Insulation." The material is stated to be quartz and alumina; it has been introduced into rubber compounds for electrical purposes, with results reported to have been most satisfactory. The company state that there are many uses in the rubber industry to which their material may be applied. D. J. Barry is president and treasurer, and John F. Green vice-president and general manager. The company purpose building a factory next spring.

HARD RUBBER AUTOMOBILE ACCESSORIES.

THE products of the Joseph Stokes Rubber Co. (Trenton, New Jersey) in hard rubber embrace a number of specialties of interest to the automobile trade, including a steering wheel consisting of an aluminum or other metal web with a rim composed of a steel tube covered with hard rubber. These wheels are furnished in different styles to meet the requirements of various car makers; some with solid rims, others with control grips in the rim, and so on. The company's line also includes starting crank handles, grips, radiator caps, throttle lever grips, and the like.

THE GUAYULE RUBBER INTEREST.

THE Torreon (Mexico) Enterprise of November 16 says: "The report that the Continental-Mexican Rubber Co.'s plant in this city is likely to be closed down for a time is denied by head officials of the company. It is claimed that they have enough shrub on hand and contracted for to keep them running at the present rate for two years. Besides, they have extensive guayule lands of their own from which they can gather immense quantities of the guayule plant. It is further stated that the night force, which was recently laid off, will be put back to work just as soon as financial matters are again in good shape in the East."

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending November 23:

COMMON STOCK.

Week	Nov.	2	Sales 2250 shares	High	10 ¹ / ₄	Low	10 ¹ / ₂
Week	Nov.	9	Sales 3780 shares	High	17 ³ / ₄	Low	15
Week	Nov.	16	Sales 2210 shares	High	16 ¹ / ₂	Low	14 ³ / ₄
Week	Nov.	23	Sales 2200 shares	High	15 ¹ / ₄	Low	13 ¹ / ₂

For the year—High, 52¹/₂, Feb. 16; low, 13¹/₂, Nov. 21.
Last year—High, 59¹/₂; low, 38.

FIRST PREFERRED STOCK.

Week	Nov.	2	Sales 4374 shares	High	70	Low	61 ¹ / ₄
Week	Nov.	9	Sales 2630 shares	High	70 ³ / ₄	Low	65
Week	Nov.	16	Sales 2600 shares	High	67 ¹ / ₄	Low	63 ¹ / ₈
Week	Nov.	23	Sales 3170 shares	High	65	Low	62

For the year—High, 100⁷/₈, Jan. 7; low, 61¹/₄, Oct. 30.
Last year—High, 115; low, 104³/₄.

SECOND PREFERRED STOCK.

Week	Nov.	2	Sales 600 shares	High	43 ³ / ₄	Low	40
Week	Nov.	9	Sales 270 shares	High	44 ¹ / ₄	Low	43
Week	Nov.	16	Sales 200 shares	High	40	Low	39 ¹ / ₄
Week	Nov.	23	Sales 800 shares	High	42	Low	39

For the year—High, 78¹/₂, Jan. 7; low, 30, Nov. 21.
Last year—High, 87¹/₂; low, 75.

NO "WASTE RUBBER" IS WASTED.

At a recent sale at auction in Boston of the effects of a firm in the waste materials trade, the catalogue embraced more than 20 rubber items, which are repeated below, to illustrate the grow-

ing tendency to utilize worn out rubber goods of every firm. The list included rubber boots and shoes, rubber strip, hard rubber valves, mixed auto tires, scrap rubber belting, scrap tape, white friction, matting and packing, bicycle tires, mixed rubber hose, fire hose, rubber sneakers, large hose, solid tires, red packing rubber, cement waste, rubber substitute, gutta-percha, pure gum scrap, hard rubber, mixed inner tubes, black rubber, white rubber, white cloth insertion packing, black horseshoe pads, red rubber, metal and rubber, carriage cloth, balloon scrap, hard rubber shavings, dress shields, and insulated copper wire.

GOODRICH GOODS IN CLEVELAND.

THE Forest City Rubber Co. (Cleveland, Ohio) have recently become the sole representatives in their territory for *The B. F. Goodrich Co.* (Akron, Ohio), for mechanical rubber goods. They consider this a very notable achievement, because of the very high standing of the Goodrich company, and also because *The B. F. Goodrich Co.* have always refrained in the past from extending to any one concern an exclusive agency for their goods. *The Forest City Rubber Co.* have lately completely their second year under the management of Mr. William G. Grofut, and have met with very flattering success.

SWINEHART TIRES IN EUROPE.

THE Bavarian Rubber and Asbestos Works, of 63, Crutched Friars, London, E.C., are referred to as having secured the sole licenses for the manufacture and sale of the Swinehart solid vehicle tires in Great Britain and the British colonies. This company is the British representative of *Actiengesellschaft Metzeler & Co.*, of Munich, mentioned in *THE INDIA RUBBER WORLD* of October 1, 1907 (page 17), as having arranged with *The Swinehart Clincher Tire and Rubber Co.* (Akron, Ohio) for the manufacture of these tires in Germany.

DAVIDSON RUBBER CO.

THE Davidson Rubber Co. (Boston) are announcing prominently that they are proprietors of the Sterling Fountain Pen Co., the makers and distributors of the "Sterling" fountain pen, which would seem to set at rest any report current recently that the company have disposed of part of their business.

TRADE NEWS NOTES.

J. H. LANE & Co. (New York) are back of a large cotton duck mill which they claim will be bigger, better, and more up to date for the production of duck for belting and hose than anything before projected. The mill will be located in Georgia.

Mr. Wilmer Dunbar, superintendent of the Pennsylvania Rubber Co. (Jeannette, Pa.), has been elected vice president of the Glass City Union Deposit Bank, of Jeannette.

The new taxicabs introduced by the New York Taxi-Cab Co. [See *THE INDIA RUBBER WORLD* November 1, 1907—page 58] are equipped with tires made by *The B. F. Goodrich Co.*, of Akron, Ohio.

Home Rubber Co. (Trenton, New Jersey) have begun the manufacture of insulated wire. The marking which they have adopted under the rules of the National Electric Code is a red thread woven crosswise into the braid.

The Manhattan Rubber Manufacturing Co. have renewed for ten years the lease on the premises, No. 18 Vesey street, occupied as their offices in New York.

Rumor has it that Mr. S. H. C. Miner, of Montreal, who was in Boston recently, was considering plans for equipping a new, up-to-date electrically operated rubber shoe factory for the Dominion, to be run independently of any other concern in the trade.

The Manufactured Rubber Co. (Philadelphia) has declared a dividend of 1¹/₂ per cent., payable on December 2 to holders of record on November 23.

DERMOT McEVROY.

DERMOT McEVROY, the new general manager of the Derby Rubber Co., rubber reclaimers, at Derby, Connecticut, was born at Handsworth, a suburb of Birmingham, England, in 1871. He attended Lancaster school in Cambridge, but later obtained a scholarship in King Edwards grammar school at Birmingham,



DERMOT McEVROY.

where he remained until 1886. Articles of apprenticeship were signed with the Birmingham Central Tramway Co., binding him to work for three years in their new locomotive repair shops, to the end that he might lay the foundation of a mechanical engineer's education. The work in these shops embraced the making necessary running repairs to, and the rebuilding of, the small high pressure locomotives used on this system, which has since been electrified. The work was hard

and the hours long, but the lessons learned apart from machinery were patience, resourcefulness, and the many sterling qualities of the wage earners with whom he was thrown in daily contact. In 1888 his father, Bernard McEvroy, moved to Canada, and became editorially connected with the *Toronto Mail and Empire*, in which position he became well known. The subject of this sketch followed when his apprenticeship was finished, and connected himself with the Polson Iron Works, at Toronto, where he worked at first as a journeyman fitter and erector. In less than a year he was taken into the drawing office, where his shop experience stood him in good stead. As a draftsman he worked with many firms, gaining experience and knowledge of men. The Welland Iron Works, in Toronto; The Walker Manufacturing Co., Cleveland, Ohio; The Turner Vaughn and Taylor Co., Cuyahoga Falls, Ohio; The Buffalo Engineering Co., Buffalo, N. Y.; and the Canadian General Electric Co., Petersburg, Canada, were the firms in whose service he was prior to 1895, when he became assistant to Mr. E. C. Shaw, at that time consulting engineer for The B. F. Goodrich Co., of Akron, Ohio. The work of remodeling the factory was begun, and large additions were about to be made. In 1896 Mr. McEvroy's health rendered a change necessary and he went west to a Colorado cattle ranch. Returning in the fall he opened an office as mechanical engineer in Toronto. One of his first clients was the Gutta Percha and Rubber Manufacturing Co., of that city, who were contemplating changes in their factory. His plans were accepted, and Mr. McEvroy gave up his office to become chief engineer for the company. Many changes and improvements were made during his occupancy of this position, which terminated in 1903. In this year Mr. D. Lorne McGibbon was planning to remodel the plant of the Canadian Rubber Co., of Montreal, and he secured the services of Mr. McEvroy as engineer in charge of construction. Many additions have been made since that time including a new reclaiming plant, wash house and dry rooms boiler house and cement factory. The work of changing the general plants had to be made while they were in full operation, and Mr. McEvroy was consequently in close touch with

the details of all lines of manufacturing in every rubber factory with which he has been connected. His latest move is chronicled at the beginning of this article.

TRADE NEWS NOTES.

THE directors of the Boston Woven Hose and Rubber Co. have declared the regular semi-annual dividend of \$3 per share on the preferred stock, payable December 14, 1907, to stockholders of record December 5.

Wallace L. Gough Co. (New York and Boston) announce that W. G. Ryckman, who has become well known to the trade through his connection with the Continental Rubber Co., in the introduction of Guayule rubber, has resigned from that company to take a similar position with the house of Gough.

Mishawaka Wooden Manufacturing Co. (Mishawaka, Indiana) are reported to have purchased some additional water rights and to be making an extensive increase of their factory capacity, for which purpose new machinery is being installed.

Electrose Manufacturing Co. (Brooklyn) announce that insulators of electrose have been adopted for the overhead third rails for the electric traction system in the new "Belmont" tunnel, under the East river, New York, in view of the favorable results shown by a series of tests of this material in work of this kind lasting for 13 months.

The Fairfield Rubber Co. (Fairfield, Connecticut), at the beginning of the past month, resumed a schedule of work on full time.

Mr. Edward H. Openshaw, a very well known mechanical goods superintendent, has accepted a position with the Cincinnati Rubber Manufacturing Co., as superintendent of their works in Cincinnati.

Mr. Ernest E. Buckleton, general manager of the Northwestern Rubber Co., Limited, of Liverpool, was a visitor to the States during the past month.

MR. REIMERS AND HIS HOME.

HERMAN REIMERS, breezy, jolly, wholesome, has been again in America on a "vacation trip." Since his retirement from the crude rubber business he has made his home in Honnef, Germany, a beautiful town on the Rhine, with the "Seven Mountains" in the background, where he has built a fine home. Here he lives, when not motoring over Europe or traveling and sight-seeing. Not that he is German in the slightest degree. That he is still an American is attested by the big United States flag that on a lofty staff flies above his lawn. His old friends have given him the heartiest kind of welcome, and his fund of stories, quaint observations, and jolly descriptions of doings and sayings of others the world over prove him to be the same friendly, alert diffuser of cheerfulness that he was when he was at the head of the house of Reimers & Co. in New York.



HOME OF MR. REIMERS, ON THE RHINE.

Review of the Crude Rubber Market.

At this writing fine new Islands Pará at New York is quoted at about 73 cents per pound—a lower price than has been mentioned in these pages for five years past. Prices for this grade for some time have fluctuated as follows:

Low.		High.	
In 1903 . . .	83¢ 84	Feb. 1 . . .	107¢ 108
In 1904 . . .	90¢ 91	Jan. 1 . . .	125¢ 126
In 1905 . . .	114¢ 115	Jan. 1 . . .	132¢ 133
In 1906 . . .	118¢ 119	July 1 . . .	124¢ 125
In 1907 . . .	72¢ 73	Dec. 1 . . .	118¢ 119
		Jan. 1 . . .	

Now that rubber prices seem to have reached a lower level than may be maintained for a considerable time, the opinion expressed in the American trade is that (1) rubber was too high before, (2) manufacturers are carrying considerably larger stocks, and (3) the financial stringency is having an effect on this, as on every other branch of trade. The fact that large cargoes of rubber continue to arrive, without increasing the stocks visible, while it is certain that consumption just now is reduced, is proof to leaders in the trade that manufacturers are putting in store a good deal of rubber bought "to arrive," probably at prices considerably higher than the present market. When rubber, some time ago, declined to about \$1.20 there were manufacturers who felt that the low water mark had been reached, and they ordered freely. The same manufacturers will not buy to-day at any price, on account of their supplies in store, and because they do not care to tie up more capital in raw material. It is pointed out that some of the smaller consumers are profiting by the present situation. Not buying largely, or very far ahead, they are able to secure rubber to-day, for current needs, at a price very far below the cost of the rubber which most of the larger concerns are using.

It is pointed out that when the automobile industry became firmly established here, with the accompanying demand for tires, some of the rubber firms made up large supplies of tires, many of which are yet on hand, in branch houses for instance, in order to be ready for any demand that might occur. A great deal of rubber thus went into consumption in a way in which rubber has not since been called for, and this is given as one of the reasons why the consumption of rubber, in America at least, had declined, even before the late financial trouble, which has lessened activity in the production of all lines of goods. Other branches of the trade are mentioned, in which stocks of manufactured goods have been piling up, as well as stores of raw materials, all pointing to conditions of a reduced call for crude rubber, now that financial conditions are not favorable to the production of any goods not in actual current demand. The free buying of rubber, due to the conditions above named, led for awhile to a rise in the price of the material to figures now regarded in the trade as abnormal.

Another element in the price situation is the recent enlarged production. While it remains true that rubber production elsewhere means the exhaustion of the resources, and while it is none the less true that rubber production from the *Hevea* species, in the Amazon region, is handicapped in many ways, the natural supplies of *Hevea* rubber are very great, and the amount gathered of late has shown an important rate of increase, to wit:

Year ending June 30, 1903	Tons	29,850
Year ending June 30, 1904		30,580
Year ending June 30, 1905		33,000
Year ending June 30, 1906		34,400
Year ending June 30, 1907		38,005

During the first part of the period here reviewed the yearly increase in the Pará rubber output was taken up by the industry, either in the manufacture of goods or for increasing factory stores. The heavy increase of 10 per cent. in production last

year, however, has not been absorbed, and the result is a surplus which is reflected in lower prices. There is to be considered also the new source of "Pará rubber," the plantations in the Far East. The 500 or more tons shipped from Ceylon and the Malay States in 1906—and the rate of output is larger this year—do not cover all the production from plantations, in actual weight. Further, the trade counts a ton of plantation Pará as equal to more than a ton of ordinary Pará, owing to the lower shrinkage. That is, 500 tons from Ceylon and Malaya would be equivalent, according to some estimates, to 600 tons of rubber from the Amazon. There is to be mentioned, finally, the new rubber from Mexico—guayule—the production of which lately has been estimated at 1,000,000 pounds a month.

To sum up, we have more rubber from the Amazon, the new plantation rubber, and guayule rubber, all coming at a time when the aggregate demand is less pressing, following all of which the reorganization of the financial system—what the so-called "panic" really amounts to—has tended to check consumption of commodities of every kind. Hence, lower prices, certainly for some months to come.

Of course any increase in demand for rubber would tend at once to put up prices. To-day, as has been explained, American manufacturers have little reason to buy, besides which the end of the year is approaching, when factories usually wish to reduce stocks rather than add to them. Increased buying is bound to come, however, and the question is what new price level may be looked for. Fine new Islands Pará rubber has been over \$1 since the beginning of 1904, though before that date it had seldom reached that figure, and had never long remained above it. Going back twenty years, in fact, rubber of this grade was never quoted in New York at over this figure except during parts of 1868, 1899, and 1900, until 1904, as above stated, since which time new conditions have seemed to point to a permanently higher level. While it is never safe to predict what rubber prices will be, rubber manufacturers probably will not base their plans for future business upon a basis of rubber at less than \$1.

Some African grades continue to be quoted at prices relatively higher than Pará's, but this is on account of limited supplies of these sorts, and the fact that a few manufacturers insist upon having particular grades of Africans for certain compounds, preferring to pay any price which may be necessary to secure them to changing their formulas. This condition cannot be expected to last indefinitely, however, and already the tendency is toward a decline in Africans to correspond with what has taken place in Pará sorts. Recent sales at Antwerp have included less rubber than usual for American account, and the feeling prevails in the trade that a good deal of Congo rubber is accumulating in the hands of dealers rather than going into consumption.

Despite the amount of cultivated Pará rubber reaching New York, this new grade can hardly be said to have "found itself" in this market. It ranks as "Pará," of course, but not as equal to Amazonian rubber, the superior price paid being due solely to the small degree of shrinkage of the Ceylon product. The feeling exists, however, that better rubber will be coming forward from the Far East as the cultivated trees become more mature, and the trade already is beginning to watch with interest the various plantation marks, with a view to determining the relative merits of the different lots coming to market.

Reports from Mexico are to the effect that there has been a decline in the activity of guayule rubber production, presumably due to the conditions of financial stringency in the United States. Some of the mills are said to be storing their products, with a view to awaiting a better demand. Shipments of guayule rubber to Europe have been more active of late than to the States.

to fill uncompleted contracts made at higher prices than now obtain on new business.

Following are the prices at New York for Pará grades, one year ago, one month ago, and November 20—the current date. Prices for many grades are purely nominal, in the absence of transactions of importance:

PARÁ.	Dec. 1, '00.	Nov. 1, '07.	Nov. 20.
Islands, fine, new.....	119@ 110½	91@ 92	72@ 73
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	123@ 124	90@ 100	83@ 84
Upriver, fine, old.....	127@ 128	105@ 106	86@ 87
Islands, coarse, new.....	71@ 72	56@ 57	44@ 45
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	97@ 98	84@ 85	66@ 67
Upriver, coarse, old.....	none here	none here	none here
Cacho (Peruvian) sheet.....	70@ 77	62@ 63	56@ 57
Cacho (Peruvian) ball.....	95@ 96	80@ 81	66@ 67
Ceylon (Plantation) fine sheet.....	136@ 137	113@ 114	93@ 94

AFRICAN.

Sierra Leone, 1st quality.....	70@ 77	Lopori ball, prime.....	75@ 76
Massai, red.....	70@ 77	Lopori strip, prime.....	72@ 73
Benguella.....	50@ 51	Madagascar, pinky.....	62@ 63
Acera flake.....	12@ 13	Iklemba.....	none here
Cameroon ball.....	61@ 62	Soudan niggers.....	72@ 73

CENTRALS.

Esmeralda, sausage....	62@ 63	Mexican, scrap.....	62@ 63
Guayaquil, strip.....	52@ 53	Mexican, slab.....	50@ 51
Nicaragua, scrap.....	62@ 63	Mangabeira, sheet.....	45@ 46
Panama, scrap.....	50@ 51	Guayule.....	30@ 31

EAST INDIAN.

Assam.....	75@ 76	Borneo.....	33@ 34
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Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	38½	Upriver, fine.....	48½
Islands, coarse.....	28½	Upriver, coarse.....	38
		Exchange.....	15¼

Latest Manáos advices:

Upriver, fine.....	48½	Exchange.....	15 7-32
Upriver, coarse.....	28½		

Statistics of Para Rubber (Excluding Cacho).

	NEW YORK.		Total	Total	Total
	Fine and Medium.	Coarse.	1907.	1906.	1905.
Stocks, September 30...Tons	124	49 =	173	156	317
Arrivals, October.....	933	380 =	1313	1354	1189

Aggregating.....	1057	420 =	1486	1510	1506
Deliveries, October.....	938	378 =	1316	1385	1279

Stocks, October 31.....	119	51 =	170	125	227
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	PARÁ.		ENGLAND.	
	Tons		Tons	
Stocks, Sept. 30...Tons	572	1450	477	550
Arrivals, October....	2950	2985	3350	895

Aggregating.....	3522	4435	3827	1445	1325
Deliveries, October....	3105	4295	3672	850	825

Stocks, October 31...Tons	417	140	155	505	500
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World's visible supply, October 31.....Tons 2779

Pará receipts, July to October 31.....7670

Pará receipts, Cacho, same dates.....880

Afloat Pará to United States, October 31.....835

Afloat Pará to Europe, October 31.....762

Liverpool.

EDMUND SCHLUTER & Co. report [October 31]:

Reports at Manáos since July 1 (although not those at Pará) were larger in 1907 than in 1906; dear money and curtailed credit have diminished the buying power of the consuming markets, and with the continuance of these unfavorable circumstances an early improvement of prices does not seem probable. On the other hand, it is probably true that a large "short" amount exists, and any delay in the receipts at Manáos during November-December—especially should America have an early winter—may quickly put a different aspect on the market. There appears to be no serious complaint by manufacturers of want of business, with the possible exception of a portion of the mechanical trade, chiefly in the United States.

THE WORLD'S VISIBLE SUPPLY OF PARÁ, OCTOBER 31

	1907.	1906.	1905.	1904.	1903.	1902.
Tons.....	3750	2562	2936	2207	2457	3107
Prices, hard fine....	4 0½	5 2¼	5 2½	5 ½	4 2½	2 3¾

LIVERPOOL STOCKS OF AFRICAN RUBBER, OCTOBER 31.

1907.....200	1904.....401	1901.....073
1906.....340	1903.....235	1900.....789
1905.....240	1902.....547	1899.....547

OFFICIAL STATISTICS OF RUBBER (IN POUNDS).

UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1907.....	3,231,861	293,394	2,938,467
January-August.....	50,500,909	3,024,797	47,476,112
Nine months, 1907..	53,732,770	3,318,191	50,414,579
Nine months, 1906..	47,242,543	2,587,413	44,655,130
Nine months, 1905..	48,769,898	2,356,825	46,413,073

GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1907.....	2,644,620	881,100	1,763,520
January-August.....	24,224,040	8,251,540	15,973,100
Nine months, 1907..	26,860,260	9,132,640	17,736,620
Nine months, 1906..	27,019,320	8,731,800	19,187,520
Nine months, 1905..	33,701,120	12,538,900	21,252,220

FRANCE.*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1907.....	2,391,620	1,318,020	1,073,600
January-August.....	22,206,140	13,732,840	8,473,300
Nine months, 1907..	24,597,700	15,050,860	9,546,900
Nine months, 1906..	23,201,700	14,004,540	9,257,160
Nine months, 1905..	10,182,900	12,190,640	6,992,260

GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
September, 1907.....	4,757,088	2,846,144	1,910,944
January-August.....	52,711,008	27,774,544	24,936,464
Nine months, 1907..	57,468,006	30,620,688	26,847,408
Nine months, 1906..	40,207,648	26,838,672	22,368,976
Nine months, 1905..	46,466,224	25,599,392	20,866,832

NOTE: German statistics before Jan. 1, 1906, include Gutta-percha, Balata, old (waste) rubber. British figures include old rubber. French, Austrian and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

* General Commerce.

Rubber Scrap Prices.

LAST month's quotations are reported without change, the inactive position of the market being such as to render it impossible to give more exact prices:

Old rubber boots and shoes—domestic.....	11¾@ 12
Old rubber boots and shoes—foreign.....	11¼@ 11½
Pneumatic bicycle tires.....	7½@ 7¾
Automobile tires.....	9½@ 10
Solid rubber wagon and carriage tires.....	10 @ 10½
White trimmed rubber.....	12½@ 12¾
Heavy black rubber.....	5¾@ 6
Air brake hose.....	4¾@ 5
Fire and large hose.....	3½@ 3¾
Garden hose.....	2½@ 2¾
Matting.....	1½@ 1½½

SPECIAL NOTICES

A PRACTICAL rubber man, age 34, with 14 years' experience in shop, office, and sales, on mechanical goods and tires, wants position as superintendent, or sales manager, or preferably, manager of small factory in right location for development. Address Box 26, care of THE INDIA RUBBER WORLD. (396)

SUPERINTENDENT or MANAGER.—Position as superintendent or manager of druggists' sundries factory. Thorough knowledge of complete druggists' sundries line, either manufacturing or selling; compounds, costs, economic and improved methods of manufacture, etc. Ten years' experience with leading manufacturers. Best of references. Address Box 27, care of THE INDIA RUBBER WORLD. (397)

WANTED.—Position as superintendent or factory manager. I am qualified by business and factory experience; a close student of and systematizer of methods, with long training in reduction of labor cost and waste. Well acquainted with rubbers, and a successful compounder of mechanical and insulation stocks. Prefer an established concern, desiring to reorganize its factory method. Address J. C. W., care of THE INDIA RUBBER WORLD. (398)

WANTED.—By an old established company in California, experienced operator for Circular Loom, for weaving cotton hose. Must thoroughly understand the business and be able to break in new help and take charge of room. Address H. D., care of THE INDIA RUBBER WORLD. (399)

MASSACHUSETTS CHEMICAL CO.

WALPOLE, MASS., U. S. A.

Operate Walpole Rubber Works, Walpole Varnish Works.

RUBBER MANUFACTURERS CAN SAVE MONEY BY USING OUR

No. 17 RUBBER FLUX No. 48

It permits additional compounding and puts old stocks in a merchantable condition

Our Flux is used extensively by wire manufacturers for slicking and weatherproofing. Write for prices and samples. We are the largest manufacturers of Friction Tapes in the world. If interested write us about Friction Tape and Cloth.



THIS HANDSOME COLORED HANGER, 26 x 17, IS FURNISHED GRATIS WITH ORDERS FOR

GLORIA RUBBER SPONGES

GLORIA

PRUSSIAN RUBBER SPONGES

Carried in Stock for Prompt Delivery

Also in stock during December for Christmas Sales Hanover Red Rubber Toys, Hanover Inflated Painted Balls, Hanover Combs, etc.

THE HANOVER RUBBER CO., Ltd.

(Hannoversche Gummi-Kamm Co., Act. Ges.)

Hanover-Limmer, Prussia

GEO. BORGFELDT & CO.

SOLE AGENTS FOR U. S. AND CANADA

48 & 50 W. 4th St., NEW YORK

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

Nov. 2.—By the steamer <i>Madagascare</i> , from Manãos and Pará:					
IMPORTER.	Fine.	Medium.	Coarse.	Cancho.	Total.
General Rubber Co.	120,400	18,300	67,200	6,400	212,300
Poel & Arnold	99,700	22,500	47,800		170,000
New York Commercial Co.	83,000	18,300	24,200	6,800	132,300
A. T. Morse & Co.	90,300	9,500	19,200	400	119,400
Hagemeyer & Brunn	24,300	300	13,200		37,800
Edmund Reeks & Co.	5,700				5,700
Total	423,400	68,900	171,600	13,600	677,500

Nov. 13.—By the steamer <i>Cearense</i> , from Manãos and Pará:					
New York Commercial Co.	185,700	38,100	66,500		290,300
A. T. Morse & Co.	210,600	38,200	35,200		284,000
Poel & Arnold	180,200	40,900	33,600	14,600	275,300
General Rubber Co.	133,700	23,500	58,800	2,100	218,100
C. P. dos Santos	4,700	300	46,200		51,200
Hagemeyer & Brunn	1,100		5,300		6,400
Total	722,000	141,000	245,600	16,700	1,125,300
Nov. 11.—By the steamer <i>Bolivar</i> , from Iquitos:					
Edmund Reeks & Co.	5,000		3,800	300	9,100

PARA RUBBER VIA EUROPE.

OCT. 26.—By the <i>Baltic</i> —Liverpool:			OCT. 30.—By the <i>Eithel Fred'k</i> —Mollendo:			NOV. 4.—By the <i>Celtic</i> —Liverpool:		
Poel & Arnold (Cauchó)	11,500		W. R. Grace & Co. (Cauchó)	6,500		Poel & Arnold (Coarse)	4,500	
OCT. 26.—By the <i>Waldorsee</i> —Hamburg:			OCT. 30.—By the <i>Carmania</i> —Liverpool:			NOV. 11.—By the <i>Minnetonka</i> —London:		
A. T. Morse & Co. (Cauchó)	3,000		New York Commercial Co. (Coarse)	42,000		General Rubber Co. (Coarse)	22,500	
OCT. 29.—By the <i>Minnehaha</i> —London:			Poel & Arnold (Cauchó)	4,500	46,500	NOV. 18.—By the <i>Caronia</i> —Liverpool:		
General Rubber Co. (Coarse)	9,000		NOV. 8.—By the <i>Quilpec</i> —Mollendo:			New York Commercial Co. (Fine)	45,000	
OCT. 29.—By the <i>Kroonland</i> —Antwerp:			New York Commercial Co. (Fine)	8,500		Robinson & Stiles (Fine)	28,000	
W. L. Gough Co. (Fine)	6,500		New York Commercial Co. (Coarse)	2,500		W. L. Gough Co. (Fine)	5,000	75,000
			W. R. Grace & Co. (Cauchó)	11,500	22,500			

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life, low percentage of resin and is practically clean.**

Guayule has come to stay and is responsible for the drop in fine Para. The largest factories are using it in increasing quantities. If your competitor can undersell you, be sure he is reducing his cost by using Guayule. It will pay you to experiment.



has been on the market for over 18 months and is known to be the best Guayule made as to life, strength, purity and low percentage of resin



is the same high grade Guayule, **clean and dry**, ready for compounding.

No stocks kept on hand to deteriorate, but contracts made for regular monthly shipments as capacity of our five factories will permit.

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

OTHER ARRIVALS AT NEW YORK.

CENTRALS.

Oct. 24.—By the <i>Byron</i> =Bahia:		POUNDS.
New York Commercial Co.	34,000	
A. Hirsch & Co.	16,000	
Poel & Arnold.	11,500	
J. H. Rosbach & Bros.	5,000	
A. D. Hitch & Co.	4,500	71,000
Oct. 25.—By the <i>Proteus</i> =New Orleans:		
Manhattan Rubber Mfg. Co.	9,000	
A. T. Morse & Co.	1,500	
A. N. Rotholz.	1,000	
Eggers & Heinlein.	1,000	12,500
Oct. 26.—By the <i>Monterey</i> =Frontera:		
E. Steeger & Co.	1,500	
Harburger & Stack.	1,000	2,500
Oct. 28.—By the <i>Zulia</i> =Maracaibo:		
Suzarte & Whitney.		2,500
Oct. 28.—By the <i>Antilla</i> =Tampico:		
Continental Mexican Rubber Co.	*50,000	
New York Commercial Co.	*33,000	
Ed. Maurer	*25,000	108,000
Oct. 29.—By the <i>Advance</i> =Colon:		
G. Amsinck & Co.	16,500	
Hirzel, Feltman Co.	5,000	
Piza Nephews Co.	5,000	26,500
Oct. 30.—By the <i>Eithel Fred'h</i> =Colon:		
Hirzel, Feltman & Co.	8,500	
G. Amsinck & Co.	2,500	
A. Rosenthal Sons.	2,500	
L. Johnson & Co.	1,500	15,000
Oct. 31.—By the <i>Sarnia</i> =Colombia:		
G. Amsinck & Co.	1,500	
Sperling & Williams.	1,000	
Pedro A. Lopez.	1,000	
Mecke & Co.	1,000	
D. A. De Lima & Co.	1,000	
Escobar & Gorgorza.	1,000	6,500
Nov. 2.—By the <i>Merida</i> =Vera Cruz:		
New York Commercial Co.	5,000	
Harburger & Stack.	1,500	6,500
Nov. 4.—By the <i>Panama</i> =Colon:		
L. Johnson & Co.	17,000	
Hirzel, Feltman & Co.	5,500	
G. Amsinck & Co.	4,000	
Henry Mann & Co.	3,000	
Piza Nephews Co.	1,500	
National Machine Co.	1,500	
Isaac Brandon & Bros.	1,000	33,500
Nov. 4.—By the <i>El Dorado</i> =New Orleans:		
A. N. Rotholz.		3,000
Nov. 6.—By the <i>Prins Aug. Willem</i> =Colombia:		
G. Amsinck & Co.	4,000	
M. Blanco Co.	2,000	
Cortes Commercial Co.	2,000	
West Coast Rubber Co.	2,000	
I. Brandon & Bros.	1,000	11,000
Nov. 6.—By the <i>Colorado</i> =Mobile:		
A. T. Morse & Co.		8,000
Nov. 7.—By the <i>Voltaire</i> =Bahia:		
New York Commercial Co.	11,000	
Thomsen & Co.	4,500	
A. Hirsch & Co.	1,500	17,000
Nov. 9.—By the <i>Dunottar</i> =Colon:		
G. Amsinck & Co.	15,000	
Dumarest Bros. Co.	5,000	
Hirzel, Feltman Co.	2,000	
Jose Julia & Co.	2,000	
Aramburo Incpn.	1,500	
Pablo, Calvet Co.	1,000	
M. Hecht	1,000	
Andreas & Co.	1,000	
George A. Alden & Co.	1,000	29,500
Nov. 9.—By the <i>El Paso</i> =Galveston:		
Continental-Mexican Co.		*65,000
Nov. 4.—By the <i>Washington</i> =Tampico:		
Ed. Maurer	*135,000	
New York Commercial Co.	*48,000	183,000
Nov. 13.—By the <i>Sigismund</i> =Colon:		
G. Amsinck & Co.	6,000	
J. Johnson & Co.	7,000	
Hirzel, Feltman & Co.	5,000	
A. Held	5,000	
A. M. Capens Sons.	2,500	
A. Cantos Co.	1,500	
Roldau & Van Sickle.	1,000	28,000
Nov. 13.—By the <i>El Norte</i> =Galveston:		
Ed. Maurer	*25,000	
Nov. 15.—By the <i>Mexico</i> =Frontera:		
Harburger & Stack.	4,500	
E. N. Tibbals Co.	1,500	
H. Marquardt & Co.	1,500	
New York Commercial Co.	1,000	
Graham Hinkly Co.	1,000	9,500

CENTRALS—Continued.

Nov. 18.—By the <i>Dunottar</i> =Bahia:		POUNDS.	
J. H. Rosbach & Bros.	15,000		
Nov. 20.—By the <i>El Rio</i> =Galveston:			
Ed. Maurer.	*22,500		
Nov. 19.—By the <i>Potsdam</i> =New Orleans:			
A. T. Morse & Co.	3,000		
Manhattan Rubber Mfg. Co.	2,500		
G. Amsinck & Co.	2,500		
A. N. Rotholz.	1,000	9,000	
Nov. 19.—By the <i>Altal</i> =Colon:			
G. Amsinck & Co.	2,500		
L. Johnson & Co.	7,000		
Colombian Trading Co.	2,500		
Schultz & Goehnen.	9,500		
Isaac Brandon & Bros.	3,000		
A. Santos & Co.	2,000		
Hirzel, Feltman & Co.	1,500	25,000	
Nov. 20.—By the <i>C Lima</i> =Colon:			
G. Amsinck & Co.	25,000		
Hirzel, Feltman & Co.	10,000		
Dumarest Bros. Co.	3,000		
L. Johnson & Co.	3,000		
R. Fabien & Co.	1,500		
Isaac Brandon & Bros.	1,500		
Pablo, Calvet Co.	1,000		
Colombian Trading Co.	1,000		
Henry Mann & Co.	1,000	47,500	
*This sign in connection with imports of Centrals denotes Guayaquil Rubber.			
AFRICANS.			
Oct. 26.—By the <i>Baltic</i> =Liverpool:			
Poel & Arnold.	34,000		
A. T. Morse & Co.	11,500		
A. W. Brunn Co.	7,000	52,500	
Oct. 26.—By the <i>Hallensee</i> =Hamburg:			
A. T. Morse & Co.	33,000		
Poel & Arnold.	25,000		
General Rubber Co.	4,500		
Childs & Co.	3,500	66,000	
Oct. 29.—By the <i>Ky nland</i> =Antwerp:			
W. L. Gough Co.	11,500		
A. T. Morse & Co.	9,000		
Poel & Arnold.	4,500		
Robinson & Stiles.	7,000		
Rubber Trading Co.	5,500	37,000	
Oct. 30.—By the <i>Carmada</i> =Liverpool:			
General Rubber Co.	22,500		
Poel & Arnold.	11,000		
George A. Alden & Co.	10,000		
W. L. Gough Co.	9,500		
Earle Brothers.	3,500	54,500	
Nov. 2.—By the <i>Lucania</i> =Liverpool:			
General Rubber Co.	67,000		
Livesey & Co.	3,000		
A. W. Brunn Co.	1,500	71,500	
Nov. 4.—By the <i>Gaspagne</i> =Havre:			
Robinson & Stiles.	7,000		
Nov. 6.—By the <i>Armenian</i> =Liverpool:			
General Rubber Co.	75,000		
Nov. 6.—By the <i>President Grant</i> =Hamburg:			
Poel & Arnold.	31,000		
General Rubber Co.	18,000		
A. T. Morse & Co.	13,500		
Livesey & Co.	4,500		
W. L. Gough Co.	3,000	72,500	
Nov. 7.—By the <i>Samsland</i> =Antwerp:			
George A. Alden & Co.	50,000		
Poel & Arnold.	25,000		
A. T. Morse & Co.	33,500		
Joseph Cantor.	11,500	120,000	
Nov. 9.—By the <i>Touraine</i> =Havre:			
George A. Alden & Co.	11,500		
Nov. 9.—By the <i>Celtic</i> =Liverpool:			
General Rubber Co.	45,000		
Poel & Arnold.	26,000		
A. T. Morse & Co.	4,500		
W. L. Gough Co.	6,500	82,000	
Nov. 11.—By the <i>Trignac</i> =Bordeaux:			
General Rubber Co.	67,000		
A. T. Morse & Co.	33,500		
Joseph Cantor.	3,500	104,000	
Nov. 12.—By the <i>Potsdam</i> =Rotterdam:			
A. T. Morse & Co.	22,500		
Rubber Trading Co.	2,500	72,500	
Nov. 14.—By the <i>Peninsular</i> =Lisbon:			
Poel & Arnold.	44,500		
George A. Alden & Co.	11,500	56,000	
Nov. 15.—By the <i>Pretoria</i> =Hamburg:			
General Rubber Co.	15,000		
Robinson & Stiles.	5,500	20,500	

AFRICANS—Continued.

Nov. 8.—By the <i>Arabic</i> =Liverpool:		POUNDS.	
General Rubber Co.	22,500		
Nov. 18.—By the <i>Carma</i> =Liverpool:			
Poel & Arnold.	22,500		
Rubber Trading Co.	5,500	28,000	
EAST INDIAN.			
Oct. 24.—By the <i>Wary Castle</i> =Singapore:			
W. L. Gough Co.	33,500		
Joseph Cantor.	7,000	40,500	
Oct. 29.—By the <i>Manchukha</i> =London:			
General Rubber Co.	*9,000		
A. T. Morse & Co.	*2,500	11,500	
Oct. 29.—By the <i>Tad r Prince</i> =Singapore:			
W. L. Gough Co.	24,000		
George A. Alden & Co.	4,000	28,000	
Nov. 4.—By the <i>H henfels</i> =Colombo:			
A. T. Morse & Co.	*10,000		
Nov. 7.—By the <i>Cestrian</i> =London:			
A. T. Morse & Co.	*15,000		
Nov. 9.—By the <i>Batavia</i> =Singapore:			
H. Pauli & Co.	25,500		
W. L. Gough Co.	9,500		
Robinson & Stiles.	2,000	31,000	
Nov. 9.—By the <i>Winnipeg</i> =London:			
General Rubber Co.	*9,000		
General Rubber Co.	6,500		
A. T. Morse & Co.	5,000	20,500	
Nov. 12.—By the <i>Hohenfels</i> =Colombo:			
A. T. Morse & Co.	*11,500		
Nov. 15.—By the <i>Mosala</i> =London:			
A. T. Morse & Co.	*18,000		
George A. Alden & Co.	*7,000	25,000	
Nov. 15.—By the <i>Satsuma</i> =Singapore:			
W. L. Gough Co.		16,000	
*Deer's Plantation Rubber.			
GUTTA JELATONG.			
Oct. 20.—By the <i>Tad r Prince</i> =Singapore:			
M. J. Chapman & Co.	325,000		
Poel & Arnold.	170,000		
W. L. Gough Co.	125,000		
George A. Alden & Co.	100,000		
L. C. H. K. & Co.	100,000	820,000	
Nov. 2.—By the <i>Ky nland</i> =Rotterdam:			
George A. Alden & Co.	45,000		
Nov. 6.—By the <i>Aberdeen</i> =Singapore:			
M. J. Chapman & Co.	175,000		
Poel & Arnold.	200,000		
Robinson & Stiles.	150,000		
Hirzel & Co.	100,000	625,000	
GUTTA PERCHA.			
Nov. 1.—By the <i>Albatros</i> =Liverpool:			
W. L. Gough Co.	9,000		
Nov. 6.—By the <i>Aberdeen</i> =Singapore:			
H. Pauli & Co.	35,000		
BALATA.			
Oct. 21.—By the <i>Caribbee</i> =Ciudad Bolivar:			
G. Amsinck & Co.	35,000		
Frame & Co.	5,000	40,000	
Nov. 4.—By the <i>Alanca</i> =Demerara:			
George A. Alden & Co.	5,000		
Middleton & Co.	1,000	6,500	
Nov. 5.—By the <i>Prins Maurito</i> =Curapano:			
A. T. Morse & Co.	8,000		
Nov. 9.—By the <i>Grenada</i> =Bolívar:			
G. Amsinck & Co.	22,500		
Nov. 12.—By the <i>Guiana</i> =Demerara:			
George A. Alden & Co.	3,500		
Nov. 16.—By the <i>Prins Nederland</i> =Demerara:			
A. T. Morse & Co.	11,500		
Frame & Co.	4,500	16,000	

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—OCTOBER.		
Imports:	Pounds.	Value.
India-rubber	5,355,300	\$3,808,193
Balata	95,972	44,629
Gutta-percha	27,825	14,660
Gutta-jelutong	3,749,356	200,629
Total	9,228,453	\$4,068,111
Exports:		
India-rubber	36,128	\$29,790
Balata	9,375	2,475
Reclaimed rubber	1,000	200
Rubber Scrap Imported	1,378,112	\$135,525



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WILL CHICLE BE LOWER?

[THE following communication to a leading New York commercial paper is reprinted for the interest of all of our readers who may be concerned with its subject, and not with any intention or desire to influence trade opinion on one side or the other.]

TO THE EDITOR OF THE JOURNAL OF COMMERCE AND COMMERCIAL BULLETIN—Sir: In December last I took the liberty of calling your attention to the chicle gum market, stating that there was no scarcity of the article, that prices were fictitiously high, brought about purely by speculation, and added, that the termination must be most disastrous to the speculators. Events

have borne out the correctness of these statements. The bulls still quote prices 47@50c. per pound, when in reality it would be difficult to sell 500 pounds at 5 cents per pound lower. The bulls within three weeks have sold over 100,000 pounds of prime old dry chicle, costing them not less than 50 cents per pound, at 40 cents per pound, and in addition to this over 150,000 pounds of new crop chicle has been sold to arrive at 39 cents per pound, and to-day it would be troublesome to sell a carload lot to a manufacturer at several cents below this price.

The bull speculators know this, but having high cost goods still for sale hope that by quoting prices way above the actual they may succeed in disposing of some part of their still considerable spot holdings, besides misleading Mexican shippers as to the real market value in the hope that shipments may be held back, in which event the bulls would be enabled to unload at better prices. It is not often that such tricks prevail. However, let us be charitable, for the bulls have suffered much.

Chicle prices are now ten cents per pound lower than they were two months ago; two years ago chicle sold at 27 cents per pound duty paid, which is 12 cents per pound lower than it is offered at to-day. To say that it is likely to sell at this price again before long may appear venturesome, but stranger things than this have come to pass. The seven large chewing gum manufacturers are supplied with chicle for from one to two years ahead, and the American Chicle Co., who use more chicle than all the other manufacturers combined, will not at any future time be forced to come into the open market as buyers, their own chicle concessions now producing annually much more gum than they can use annually in the same period.

When speculators grasp this fact and understand that it means disaster to any bull speculation, then will attempts to corner the chicle market be abandoned. It was this company who at several very critical periods in the recent eighteen months' speculation stepped in and purchased over one and one-half million pounds of chicle from the despairing bulls, but only at a loss of thousands of dollars to the helpless manipulators.

The present Mexican chicle crop will be a very large one, and as the demand for chicle, outside of the seven large manufacturers, does not total 400,000 pounds, it is clear what must and will happen to chicle prices within the next few months. Mexico does not comprehend that Honduras now ships chicle enough to determine the market value, still such is the fact. The bulk of the Honduras chicle goes direct to Canada, where, after being dried and cleaned, it is shipped to the States; this means a large saving in duty to manufacturers.

Honduras also ships chicle in large quantities to New Orleans and other Southern ports, furnishing by far the greater portion of chicle used by Southern and Western manufacturers. Only a small proportion of this chicle now arrives at this port. These shipments last season caused the hard-pushed bulls much anguish of spirit, but they bore all disappointments bravely to the last, and the courage and ardor they displayed was certainly worthy of a better ending.

Another potent reason for lower prices is the large use of substitutes. This bids fair to increase unless chicle declines enough to prohibit their sale. Trade depression has also set in and must grow in severity as the months go by. This must also have a most depressing influence upon all classes of merchandise. Sales of chewing gum have fallen off, compared with the same quarter last year, over 30 per cent. This tells the tale for chicle, and the wise ones will profit thereby.

THEO G. VIETOR.

New York, October 11, 1907.

THE United States consul at Amsterdam, in a recent report, quotes a shoe merchant in that city as saying that American shapes in rubber footwear are regarded there with favor. The merchant intimates, however, that the English makers have an advantage in that market in respect to the matter of prices.

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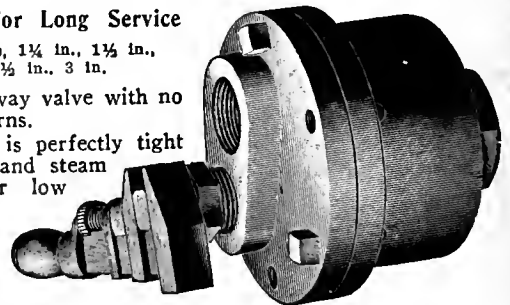
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IMPROVEMENT IN BUSINESS.

THE financial and trade situation at any particular time can hardly be reviewed adequately in a single brief article, so complex and interrelated are the currents of business, even when only one country is under consideration. But nowadays no country stands alone in matters of trade, and the business depression referred to in these columns a month ago, as was then pointed out, is not confined to the United States, though its most striking symptoms may have been exposed through the operations of certain New York banks now in process of reorganization. It is possible to assert confidently, however, that business conditions, so far as America is concerned, have shown a decided improvement during the month, and that the general feeling is a hopeful one, though the volume of trade remains on a lower scale than usual and the interruption of credit and confidence has not been fully recovered from.

The prices of shares in the leading railway and industrial corporations have shown a decided advance above the lowest quotations during the recent depression. This has been due, in part, to the tendency of people with money to invest to take advantage of the opportunity to buy on better terms than usual. The number of shareholders in such corporations has increased very largely of late. A statement relative to eight of the most important railways shows that whereas the total number

of shareholders at the beginning of the year was 89,700, it was lately 123,844. This signifies a more general distribution of wealth, which is a desirable condition, but it could not have occurred but for the fact that the public have a large reserve buying power. At the same time the transfer of so many shares of stocks at reduced prices means forced sales on the part of the former holders, who for the time being must curtail their purchases of commodities, with the result of lessening the current business of factories and merchants.

A better feeling is reported in the iron and steel industry, though in this as in all other lines production is being restricted to actual wants. But there is some inquiry for near future wants, indicating that plans are under way for coming construction. This industry is mentioned on account of its great relative size, and the fact that its condition is regarded generally as virtually a barometer of trade. The situation in the rubber industry is apparently better than could have been stated a month ago. Then reports were current of shutdowns about to occur in a number of large mills, most of which have not taken place. Some notices of shutdown have been recalled, and mills that were closed have been reopened. It is true, however, that the production of rubber goods has been kept down to the line of actual demand. The month's advance in crude rubber prices, though slight, may be regarded as favorable, indicating a returning demand for rubber.

The foreign trade of the United States is now larger than at any former period. While students of the business situation refer to the recent crisis as a result of many months of development, both the imports and exports of merchandise for the first eleven months of 1907 were largely in excess of those of any previous eleven months. There appear, in fact, no indications of other than a favorable character, unless the fact be noted that very many people appear to take it for granted, in advance, that the year of a presidential campaign, such as this is to be, will be marked by a reduced activity in business.

CONCERNING SYNTHETIC RUBBER.

JUST why so many people think that they achieve synthetic rubber, and why so many more—rubber planters, importers, and manufacturers—are fearful that it will come and in some way upset their business, it is hard to imagine. Reviewing the year's progress in this line the producers of rubber by artificial means have done everything but produce. Indeed, they seem to lack knowledge as to what synthesis is. It is specifically the building up of complex compounds by special reactions, whereby their component radicals are so grouped that the resulting substances are *identical in every respect with the natural articles*.

The producers of so-called synthetic rubber group themselves into three classes. The first makes something of the oil substitute type that may be used in connection with india-rubber, but that has no particular value used alone.

They hypnotize themselves into believing that it is practically rubber.

This is not synthesis; it is silliness.

The second class begins with crude rubber, fine Pará preferably, doctoring it with something like oil of wintergreen to thoroughly disguise it, and by dark and mysterious ways and sleight-of-hand performances, produce for the edification of capital what they call "synthetic rubber."

This is not synthesis; it is sin.

The third class embraces honest, usually aged scientists, who buy most of the ingredients for secret formulas, upset all rules governing chemical reactions (not knowing at just what point the inventor slips the ace out of his sleeve), and produce "synthetic rubber."

This is not synthesis; it is senility.

Not that it is claimed that synthetic rubber will never be attained. It may be. But its first cost for years will probably make it only the plaything of the laboratory. Indeed, so far distant does the production of synthetic rubber seem, when one reviews the attempts towards its production, that it is safe to say that when it does appear the cradles of the land will also be filled synthetically.

Not to hit in any way the honest seekers for this ideal product, but for the guidance of such geniuses as the one who is now in enforced retirement because of his synthetic camphor claims, and who deserves "several years" for robbing certain New Yorkers by his "synthetic rubber" claim, the following working formula is submitted:

10 pounds Pará rubber.
1 gallon benzol
1 ounce oil of wintergreen.

Mix thoroughly and evaporate the solvent, then thoroughly mix

15 parts above mixture.
10 parts ignorance.
25 parts avarice.
50 parts duplicity.

Compound in secret.

AMERICAN IMPORTS OF TIRES.

THE United States customs returns continue to record imports of rubber manufactures on an increasing scale, but fail to indicate the particular kinds of goods to which the increase relates. Up to a decade ago the total of such imports amounted to only a few hundred thousand dollars worth in a year, whereas for the last fiscal year the figures reached two and a half millions. The details for three fiscal years, at intervals of five years, may be summarized as follows, the figures embracing all goods classified under the tariff act as manufactures of india-rubber and gutta-percha:

From—	1896-97.	1901-02.	1906-07.
Germany	\$155,466	\$301,325	\$1,095,660
France	80,468	120,099	827,873
Great Britain.....	157,919	120,782	266,711
Other countries.....	1,294	35,330	266,603
Total	\$395,147	\$577,536	\$2,456,847

It is safe to assume that no rubber footwear worth

mentioning is imported into the United States. Nor do imports of belting, hose, or other staple lines of mechanical rubber goods figure in our trade. Certain surgical goods, particularly of hard rubber, have always been embraced in the imports, but the improvement in the output of American factories in this branch renders it unlikely that their importation is on the increase. Probably more rubber toys are coming in, owing to the ingenuity of certain European factories in fashioning such articles on original lines and in attractive fast colors, but the increase under this head is not likely to be enough to account for the large totals shown in our table.

The one important line which remains to be mentioned is motor tires. That the importation of tires is considerable is a matter of common knowledge, and if an analysis of the trade were made it is possible that the gain in tire imports would account for a large part of the difference between \$577,536 five years ago and \$2,456,847 for the fiscal year last closed. The gain has been principally in the imports from Germany and France, the foreign countries whose tires are bought most largely in America. The gain shown in imports from Great Britain has been chiefly in gutta-percha—a stray fact which the customs returns do reveal. One more item in the table is \$266,603 worth of imports from "other countries," against about one-eighth as much five years ago. It may be mentioned that the countries figuring most largely in this gain are Italy, Belgium, and Austria, all of which are now shipping tires to America.

It may be pointed out, however, that nothing stated above indicates any decline in the rubber industry in the United States. While we are buying more rubber goods abroad we are exporting more. And some light is thrown upon the great advance in the home consumption of goods by the fact that during the last fiscal year the imports under the headings of rubber and gutta-percha (including scrap) reached a total of 135,283,581 pounds, against 90,684,069 pounds five years ago, and 40,346,059 pounds ten years ago.

GERMAN SEA CABLE INDUSTRY.

THE establishment in Germany within a few years past of a submarine cable industry on a scale which permits of competition with the world has been an accomplishment which would have justified a less modest celebration by its projectors than they have been content with. There may be those who would consider it an indifferent matter where a new factory is to be located; is it not a mere matter of capital and technical knowledge and the employment of workers? But this view was long disputed in high places. Only a few years ago, when the United States government was planning to lay cables to the new insular possessions, the idea was accepted even by many Americans that such cables could not be made in this country because there were no long

established cable works here, and no experienced cable makers.

It happens that the government did contract with American firms for the few thousands of miles of cables needed, and though these firms had not before made any submarine cables, their product has proved wholly satisfactory in practice. This successful result, however, attracted less attention than the simultaneous building up of a cable industry in Germany, for which several reasons may be suggested. No new company was formed to build the American cables, and no new factory was set up; the average citizen didn't know that any cables were being made and laid, and doesn't know to-day that the Philippines and Alaska lines were made in works abutting on New York harbor. The government gave out the contracts as a matter of routine, without attracting notice from the newspapers, and the details are confined mainly to official reports of a character little read by the public.

In Germany, on the other hand, the establishment of a submarine cable industry appealed alike to the interest of the government, industrial circles, and the general public, as a step in carrying out the deep seated German instinct of industrial progress and industrial independence of the world. Not that every soul in the German empire knows or cares about the new works at Nordenham, but none the less it is a subject for national pride that when Germans cable across the Atlantic their messages are carried by lines owned in their own country, and by lines which they were not obliged to have built abroad. And gradually the same is becoming true of German cable connections with the rest of the world.

The new German cable industry has benefitted by the support of the government, of course, as all good industries in that country do, but apart from this it has become a solidly founded commercial enterprise, paying dividends on the money invested in it, and giving regular employment to a considerable force. And when next a submarine cable is to be ordered by an American company it will not be surprising if the Germany company tender for the work. Every reader is free to draw his own conclusions from these facts, but one point that ought not to be overlooked is that an industry does not require fifty years of experience in order to turn out good work.

THE ONE HUNDRED PER CENT. DIVIDEND of the Dunlop Rubber Co., reported in our news columns, must be studied in connection with the actual resources of the company, and not merely with its stated capital. The company is in the same boat, of course, with the Dunlop tire company, and it is a simple matter of bookkeeping whether one corporation or the other is credited with large dividends. All the same, the Dunlop business for the past year appears to have been very profitable.

AN INSULATED WIRE EXPERT, a recent contribution from whose pen is summarized on another page, has a fashion of talking which may be described as "hitting out from the shoulder." He asserts that Pará rubber is not essential for good insulation work,

that it is a mistake to test rubber insulation by stretching until it breaks, and that reclaimed rubber is good material for insulating compounds. These points may not be new in the industry, but they are to most people who prepare specifications for insulated wires. But the most important suggestion in Mr. Hall's paper, to our mind, relates to manufacturers in this branch and their customers arriving at a better understanding as to what goods are wanted and how to provide them.

WIRELESS TELEGRAPHY "HAS ARRIVED," so far as we can see, to the extent of rendering a desirable and important service to man. Whether the wireless services now existing are working at a profit, we have no means of knowing, but as a rule most services of value do pay their expenses, and more. At the same time, it does not appear that the world's systems of land and submarine telegraphs are in danger of being put out of business. We are convinced that there is room for cables and "wireless" at the same time, and has been pointed out in these pages in the past, the more the new system of telegraphy is developed, the greater will be the demand for insulated wires—which is coming to mean rubber insulated wires.

SYNTHETIC CAMPHOR HAS APPEARED AS A COMMERCIAL PRODUCT, and if it should prove a success it will mean much to the celluloid trade, which in turn is of importance as a competitor, within certain limits, of the rubber industry. But the production of an artificial camphor does not of itself prove that an artificial (or synthetic) rubber is any nearer discovery than in the days when 50 cents a pound for fine Pará was almost prohibitive.

THE UNEXPECTED INFORMATION APPEARS in the usually accurate *Harper's Weekly* (New York) that "several million tons of rubber are annually converted into tires in this country." Then it must be that somebody is actually making artificial rubber and getting it into use, since we can find no evidence of so much natural rubber in existence.

THE QUALITY OF CEMENT.

IT is not unusual, in the handling of rubber cement, to find a great variation in the product put out at different times by the same manufacturer. This is apt to be due to the nature of the naphtha used in making the cement. The case is mentioned of a large cement manufacturer who ordered a barrel of 72° sweet naphtha and received a barrel billed for 72°. On investigation the material proved to be one-half 68° and one-half 76°, the whole averaging 72°. But on the principle that every chain is no stronger than its weakest link, and if in the 68° naphtha there was contained a certain amount of oil, mixing it with an equal amount of 76° naphtha would not eradicate that oil from the cement, which for some uses would prove less satisfactory on account of the oil. The higher the test the higher the evaporation qualities of the naphtha, and the quicker it will dry. It is an open question among cement men whether the mixture of different degrees of naphtha will blend the evaporating qualities of that naphtha or not, and there are some men who contend that cement made in this way dries unevenly.

At the annual meeting of the Amazon Telegraph Co., Limited (London, November 19), the accounts showed a net profit for the last fiscal year, after allowing for debenture shares, of £8728—a better showing than usual on account of an exceptionally large rubber crop. The business has been operated hitherto at a loss, however, and after deducting the profit referred to there remains a debit balance of £65,878. No dividend has ever been declared, and the Pará-Manaós cable continues to be worked with occasional interruptions. During the year 20 miles of the cable had to be abandoned and relaid.

THE EDITOR'S BOOK TABLE.

THE ANDES AND THE AMAZON. LIFE AND TRAVEL IN PERU. By C. Reginald Enock, F. R. G. S. London: T. Fisher Unwin. New York: Charles Scribner's Sons. 1907. [Cloth. Large 8vo. Pp. 16 + 370 + plates and map. Price \$5 net.]

THE capable observer who is the author of this volume—the result of much study at first hand—discerns signs of a new era in the development of Peru, a country already becoming of great commercial interest to the outside world, which is likely to have a deep impress upon its people. Peru, he observes, is endowed with everything in the mineral and vegetable world which could make the inhabitants prosperous—the products of the tropical, semi-tropical, and temperate zones; it is a land of practically undeveloped resources which are becoming increasingly tempting to foreign investors. It is predicted that the completion of the Panama canal will give a great impetus to development of this character. The country likewise possesses a long established civilization which needs only to be brought into closer touch with that of other countries to remove Peru speedily from its isolation of the past and inspire it with ideas of modern progress. The Indians, who form a great part of the population, are not to be referred to as civilized, of course, but they are docile and peaceable, and capable of being made to share in the work which is to develop a new Peru.

Commerce, says our author, is the stimulus that is disseminating knowledge of previously little known regions of Peru, particularly those east of the Andes, and commerce there means the trade in india-rubber. "This is the golden fleece of the modern Argonauts upon these savage rivers; this is the prize for which men sell their souls and destroy the souls and bodies of their fellow creatures as they did in days gone by for gold; for, written largely on the history—and it is only a history of to-day—of this modest and useful product, is the iniquity of business. Cruelty, cheating, oppression, slavery, and even murder have characterized it, from the Congo to the Amazon. Evil is being done in order, we trust, that good may come of it—ever the Jesuitical characteristic with which nature seems to work through man and commerce." At least two commercially valuable species of *Hevea* abound in the Peruvian *montaña*, and the *Castilloa*, which produces the "caucho" of the trade. The output of Peruvian rubber is increasing rapidly of late, and is now shipped direct to New York and to Europe by ocean-going steamers, which ascend the Amazon to Iquitos.

This book embraces a fine map of Peru, which we notice includes the region of the Putumayo and Caquetá rivers, rich in rubber, and referred to recently in this journal as the subject of arbitration between Peru and Colombia.

DISTRIBUTION OF THE PROTEIN IN PARA RUBBER. By D. Spence, PH.D. Liverpool: Institute of Commercial Research. 1907. [Paper. 8vo. Pp. 16. Price, 6 pence.]

METHODS OF ANALYSIS OF RAW RUBBER. By D. Spence, PH.D. Liverpool: Institute of Commercial Research. 1907. [Paper. 8vo. Pp. 16. Price, 6 pence.]

THESE papers are No. 10 and No. 13, respectively, of reprints from the *Quarterly Journal* of the institute named above, which is an important branch of Liverpool University.

COTTON MOVEMENT AND FLUCTUATION. 1902-07. THIRTY-fourth annual edition. New York: Latham, Alexander & Co. [1907.] [Cloth. 8vo. Pp. 189.]

THIS is a yearly production of an important New York firm of cotton commission merchants, whose name appears on the title page, and is probably the most comprehensive and valuable compendium of cotton facts published. It relates to stocks, consumption and prices, in America and Europe.

HENLEY'S TWENTIETH CENTURY BOOK OF RECIPES, FORMULAS AND PROCESSES. Edited by Gardner D. Hiscox, M. E. New York: The Norman W. Henley Publishing Co. 1907. [Cloth. 8vo. Pp. 787. Price \$3.]

HERE are collected 10,000 "scientific, chemical, technical, and household" recipes, etc., intended for popular rather than for factory use, and relating to practically every substance or material in modern economic use. Several pages are devoted to rubber cements, waterproofing processes, and so on, containing informa-

tion which doubtless may be turned to practical use, though of course not presented with a view to guidance in factory practice.

IN CURRENT PERIODICALS.

KURZE Übersicht über alle bisher auf *Ficus elastica* beobachteten Pilze, nebst Bemerkungen über die parasitisch auftretenden Arten. By Dr. S. H. Koorders. [Review of blights which attack the *Ficus rubber* species.]—*Notizblatt des Königlichen botanischen Gartens und museums zu Berlin*, IV-40 (Oct. 10, '07). Pp. 297-310.

Rubber Insulation for Conductors. By Fred J. Hall.—*The Electrical World*, New York. L. 21, 22 (Nov. 23, 30, '07). Pp. 1009-1010; 1053-1056.

Le Polymorphisme des *Mascarenhasia* de l'Ambongo et du Boina. By MM. Jumelle, Perrière.—*L'Agriculture Pratique des Pays Chauds*, Paris. VII-55 (Oct., '07). Pp. 283-296.

Une Nouvelle Essence Forestière du Tonkin Productrice de Caoutchouc. By Dr. Ph. Eberhardt.—*Bulletin Economique*, Hanoi. X-65 (July, '07). Pp. 576-585.

BETTER RUBBERS FOR LESS MONEY.

A PRICE list of rubber footwear issued by an important firm 30 years ago has come to the notice of Boston *Boot and Shoe Recorder*, which has instituted a comparison of its figures with the standard lists now in force. The result of the comparison is thus summarized by the *Recorder*: "The list gives 65 items, and of these the present net prices show an increase in only nine items, while there is a decrease in 25. The others either show no change or no corresponding styles are to be found in present lists. It will be noticed that the increases are mostly in the items of boys' and youths' boots. Overs and sandals show little change, and the principal reductions are in boots, arctics and heavy overs." But the question of prices is not all. As the *Recorder* says: "A comparison of quality would show a remarkable improvement for the present styles in almost every detail. The compounds of the rubber are more reliable, the work is better put together and stylish effects are given in fitting that would be considered impossible thirty years ago. Then, too, the list of 65 items was considered ample description of the styles offered. Now a similar abbreviated list not counting specialties, would run considerably over 200 items."

A FRENCH RUBBER DIRECTORY.

OUR excellent contemporary, *Le Caoutchouc et la Gutta-Percha*, the organ of the rubber trade in France, has brought out a "Universal Directory of the India-Rubber, Gutta-Percha, and Allied Industries," evidently with a view to making it an annual publication, the first issue being dated 1908. It fills nearly 500 pages, exclusive of advertisements, and the index gives 177 headings under which firms and their addresses are classified, though this embraces many duplications—as "tires" and "pneumatics" for the same list. But all the headings do not relate directly to rubber. Asbestos is included and various fabrics and ingredients used in the rubber manufacture, machinery, and so on. The first classification in the book is laboratory appliances and the last waterproof garments, between these appearing all the various branches of rubber goods production. Naturally the lists are fullest for France, but manufacturers and dealers are included in the other leading countries of Europe and the United States of America. The editor has not always distinguished properly between makers of goods and dealers, and the book bears evidences of having been set up by printers unfamiliar with the languages in which some of the firm names are expressed. We doubt not, however, that the trade will accept the invitation to suggest corrections where any may be needed, and that the work will become increasingly valuable with each new edition. The address of the publishers is 49, rue des Vinaigriers, Paris, and the price of the book 5 francs.

THE Vallambrosa Rubber Co., Limited.—An interim dividend at the rate of 50 per cent. for the half year ended September 30, 1907, was to be paid on December 24. The disbursement amounted to £12,650 [= \$61,561.23], less income tax.

Rubber Insulation for Electrical Conductors.

THE general subject of the use of india-rubber for the insulation of electric wires and cables has been treated at some length recently in *The Electrical World* (New York), by Fred J. Hall,* in a manner which brings out some practical suggestions of more than ordinary interest. Referring to grades of rubber, he mentions that Pará was specified uniformly for insulation work at a time when Africans and some other sorts came to market in a very crude form, being dirty and improperly cured. These defects have been largely overcome, and to-day rubber compounds can be made containing no Pará that will have as long a life and give as good practical results as an all-Pará compound.

The most important properties of rubber, considered from the standpoint of insulation, may be grouped under the heads (1) nonhygroscopic; (2) dielectric; (3) mechanical strength; and (4) elasticity. All these, except the nonhygroscopic property, are materially affected by processes of manufacture, and each one is developed more or less at the expense of the others. In selecting a rubber compound for insulation the manufacturer must consider many points, but as a rule he has no difficulty in determining the quality of the compound and the method of treating it so as to produce the best results at any given price. The stumbling block appears when he tries to harmonize his ideas, based on practical experience, with the theories of the purchaser as expressed in the specification.

The purchaser really has no interest in the composition of the rubber compound or in the factory method of handling it. His sole interest is to secure an insulation of high practical efficiency for the conditions of service—i. e., to purchase cables that will work for a long time and give a minimum amount of trouble. The purchaser may be convinced that this result can be obtained by the use of fine Pará rubber and draw a specification intended to preclude the use of anything but fine Pará. But he may subject himself to useless expense and force the manufacturer to produce an article which is higher in price and no more effective for the condition of service—perhaps less so—than could be produced if the manufacturer was allowed to exercise some discretion in the matter.

The writer next considers the various tests by which the purchaser endeavors to secure what he considers the best insulation. When a specific compound is called for it is usually one containing 30 per cent. of Pará rubber, and in considering various tests the writer has such a compound in mind. Pará rubber being the first to become well known, it was made the standard, and the insulating value of other rubbers was fixed by the extent to which they were shown to possess chemical and physical properties identical with Pará. It has been assumed, for instance, that unvulcanized rubbers containing a higher percentage of extractive matter (oily or resinous substance) soluble in heated acetone are of less value as insulators, but this is erroneous. The percentage of this resinous or extractive matter varies widely in different brands, nor is the quantity constant in the same brand. As pointed out by Weber, the presence of these resins in crude rubber does not appear to affect its stability in an appreciable degree, though it does affect vulcanization when it exists in larger quantities than is generally found in fine Pará. In such cases more sulphur as well as a change in the practice of time and heat may be necessary to prevent under-vulcanization. Hence a rubber containing a higher percentage of resin than Pará may be as effective an insulator if properly vulcanized.

It is a mistaken idea that the resin in rubber is highly volatile

and that when this disappears the rubber is lifeless and brittle. In fact, the resin is not volatile; the hardening of the rubber is due to the drying out of the rubber and oxidation. Dr. Esch says that the best rubber articles are not made from pure caoutchouc, and calls attention to the increase "as to elasticity and resistance to tearing asunder" in tire inner tubes when 0.5 per cent. of pitch is added to the rubber. Now there is probably no article into which rubber enters where it is more important to increase the strength of the rubber and to prevent hardening than tire tubes, and it has been proved that this is best done by the addition of an ingredient possessing a high percentage of extractive matter of the same general character as that obtained from the rubber. Vulcanized rubber always shows an increase in extractive matter over the pure unvulcanized gum, due to chemical changes the nature of which is not fully known. Sulphur is also soluble in acetone, and the free sulphur will appear in the acetone extract.

The writer regards the worthlessness of acetone tests as frequently made, and the injustice that may be done to a manufacturer by them, as obvious. He would consider that if other tests were satisfactory there would be no danger of over-adulteration in a compound showing 8 per cent. of extractive matter, including free sulphur, although purchasers are inclined to specify fine Pará with the idea that the unvulcanized rubber contains but 1 or 2 per cent. of resin, but it should be borne in mind that such results are obtained from specially selected samples. Nor is the ash test as ordinary practiced of more real value. The writer has seen variations of 6 per cent. in the ash obtained from the same compound due to inaccuracy in weighing and carelessness in burning.

The writer next treats of the stretch test for rubber insulation. Elasticity being the most obvious property of crude rubber, it has been assumed that only good rubber compounds are elastic, and the nonelastic are poor, but precisely the same compound, by changes in the quantity of sulphur and method of vulcanization, can be made highly elastic or brittle as glass. Lack of elasticity in a vulcanized rubber compound therefore is no proof of inferiority. The writer presents considerations which lead to the conclusion that a very low grade rubber compound cannot be vulcanized so as to meet the ordinary stretch test, from which it follows that the stretch test does prevent the use of low grade compounds. But such compounds do not meet the maximum acetone test, nor would they be likely to meet the electrical tests. That is, there are tests besides that for elasticity which insure the purchaser against the excessive use of low grade rubbers. Hence it is unwise to insist upon a test that forces the manufacturer to sacrifice qualities in his compound to a high factor of safety. The factors of time and heat in vulcanizing should be regulated by the mass to be vulcanized. When the surface of the outer layer of a thickly insulated conductor has been vulcanized to a point where the elastic property is greatest, the inner layers, particularly the portion lying next to the conductor, are under-vulcanized and a compound under-vulcanized is highly perishable.

The principal contributors to the factor of safety to rubber insulation for high tension are firmness and density, both of which are antagonistic to stretch. Specifying a stretch test for high pressure insulation invariably means reducing the factor of safety. [The editor of *The Electrical World* says in commenting on this point: "One might as well endeavor to determine the breaking strength of the Brooklyn bridge by loading it until it broke."]

It has been mentioned already that rubber compounds of high efficiency can be made in which lower priced rubbers than Pará

*Mr. Hall has for a number of years been connected in a managerial capacity with the well known India Rubber and Gutta Percha Insulating Co. (Dr. Habirshaw's works), at Yonkers, New York, and has therefore an intimate acquaintance with the general subject of which he treats.—THE EDITOR.

enter and the difference in price is not a fair indication of the difference in quality. The arguments in favor of using the 30 per cent. Pará mixture are (1) that being a standard it is likely to run more uniform in quality; (2) that having been long in use it has had more opportunities to prove its merits under trying conditions; (3) that in case of trouble the party responsible for the installation would be subjected to less criticism if a standard was used. Yet there are times when the additional expense necessary to procure a 30 per cent. mixture is justified—as for very high voltage, for all submarine work, and when conditions of service are exceptionally severe.

The writer refers to reclaimed rubber in these words: "A manufacturer of insulated wires and cables writes these words with a shudder and speaks them in a whisper, because to the purchaser's mind they stand for all that is dangerous in the insulation. Long ago the manufacturer learned that the judicious use of reclaimed rubber in conjunction with raw rubber of all kinds distinctly improved his compounds. He has not dared to breathe this secret, however, for fear of being blacklisted." Mineral matters used in rubber compounds have little dielectric property; they give body to the rubber, but they are inert and little real assimilation takes place. But good reclaimed rubber properly treated has considerable mechanical strength, high dielectric property, and long life; it is thoroughly assimilated by the raw rubber and has a distinctive advantage in the matter of cost. Like many other excellent things it is the abuse not the use of reclaimed rubber that is bad; the important point is the percentage and quality of raw rubber used. It is time that the value of reclaimed rubber became as generally understood as is the danger of its excessive use. It might be mentioned that if reclaimed rubber had not come into use the cost of many articles in which rubber enters would be so high that serious consequences would result.

A NEWSPAPER ON "WIRELESS."

A PROPOS of the recent opening of a wireless telegraph service across the Atlantic, on a commercial scale, by the Marconi system, the *New York Times*, in an editorial article printed on November 18, read:

"No better evidence is required of the utility of the Marconi wireless telegraph system in the service of news from abroad than the fact that considerably more than a page of fresh foreign news and gossip in the *Sunday Times* was sent from Clifden, Ireland, to Glace Bay by that system, and delivered in *Times* square quickly and accurately. Our wireless dispatches from Europe come to us in excellent shape, comparing favorably with those sent by cable, and the facilities of the wireless system improve weekly.

"The cable companies will do well to recognize the significance of the situation. The indisputable success of the wireless does not mean a restriction of the volume of their business or a decrease in their profits; quite the contrary. It means that telegraphing between Europe and America will become much more common. It must also become cheaper. The 'wireless' is not going to put the cables 'out of business,' as there will be plenty of work for both systems; but for the cable folks to 'stand pat' and decry the 'wireless' seems a foolish policy.

"The wireless transatlantic service is no longer experimental. Marconi has invented and developed it, and put it successfully in operation. It is a rival to the cable service, but not necessarily an unfriendly rival. We cannot have too many ways of speaking across the ocean."

* * *

A LETTER from the *New York Times* to THE INDIA RUBBER WORLD dated December 12 says: "Our attitude toward the transatlantic wireless service is correctly represented in the article you quote, and is now, perhaps even more favorable than it was

at the time the article was printed, for since then we have succeeded in establishing as a regular feature of the *Sunday Times* an entire page or more of dispatches from the old world, transmitted by this system."

* * *

THE announcement about the middle of October that regular wireless service between America and Europe had been established commercially is regarded by *The Electrical Review* (London) as having been premature. Our contemporary says: "Just as in 1903 when a similar attempt was made resulting in a complete fiasco, so now in 1907 enthusiasm has outrun discretion, and the trumpeting of a few weeks ago are succeeded by a dead silence in the press." Professor R. A. Fessenden, writing to the *Review*, from the American coast, of the results of the working of the Marconi system on October 18 and for a few days thereafter, points out that such troubles were experienced as low speed, lack of secrecy, and atmospheric disturbances. He asserts that "there is at the present time no operation [of wireless] which can properly be called commercial in the same sense in which we speak of the commercial working of cables." Furthermore, he asserts that the Marconi system as at present installed is not capable of commercial operation. Professor Fessenden, whose character as an expert is vouched for by the *Review*, expresses the opinion that the premature publication of exaggerated reports as to results obtained in wireless telegraphy has been harmful in that it has resulted in many persons losing their savings who could ill afford to do so, and that the whole business has been brought into disrepute with the public. Moreover, this disrepute has been responsible for the failure of various governments to grant permits within their territory for the erection of stations for working wireless services. Professor Fessenden supports his contentions in part by recording the history of a number of messages sent by the Marconi system, showing in how many cases it was necessary to repeat them even when transmitted at a very low rate of speed.

SYNTHETIC CAMPHOR IMPORTED FREE.

SYNTHETIC camphor evidently has reached the position of a commercial commodity. An importation of such material at New York was assessed for duty by the port collector as "refined camphor," against which the importers protested. The board of United States general appraisers sustained the protest, and their decision was confirmed on review before the United States circuit court for the Southern district of New York. (*Treasury Decisions*, December 5, 1907.) The court says that "synthetic camphor" crept into commerce after the date of the tariff act. It is made by a secret process, but has come to be known as camphor and to be used as a substitute for camphor. Hence, following precedent, it must be classified, in the customs, as camphor. Crude camphor cannot be put to any important use, for which reason it was placed upon the free list in 1897. The celluloid manufacturers, who are large purchasers of crude natural camphor, refine it upon their own premises. If it should be shown that synthetic camphor as imported is entirely fit for use in the arts as received, it ought to pay duty, but this was not proved to the satisfaction of the court. Natural camphor now comes in from Formosa that is in a pretty fair condition of purity, with a high melting and boiling point, and quite clean looking, but it is classified as "crude" and is admitted free. The court holds that it would be unfair to levy tribute on such artificial camphor as that in issue and permit such a product as the improved Formosa to come in free.

The Japanese government are encouraging the planting of camphor trees, and the *Bulletin Economique*, of Hanoi, reports that 6,000,000 or 7,000,000 young trees have been set out within a short time, but it does not expect to see them productive below the age of 10 years.

NEW REPAIR VULCANIZING PROCESS.

AFTER pointing out the drawbacks or disadvantages attending the various methods of cure in use hitherto for applying repair patches to tire tubes, Emile Allard, writing in *Omnia*, a French journal, describes a new vulcanizing fluid, suited for tire repairing, and sold on the market under the name "Sulfumate of Camphor," its composition being kept secret. The new preparation is intended to be used in cold curing, as distinguished from repairing operations which call for vulcanizing apparatus.

The writer quoted is of the opinion that the solvent used is tetrachloride of carbon. The "sulfumate" begins to boil at 79.5° C. [= 175.1° F.], which figure is close to the boiling point of tetrachloride. Moreover, by distillation, M. Allard has been able to isolate a colorless liquid which boils at 78.1° C., the identical boiling point of tetrachloride of carbon. The "sulfumate" possesses therefore the advantages of the tetrachloride—absolute inflammability and absence of danger of explosion. As to the vulcanizing compound, it appears to be chloride of sulphur, containing sulphur in solution. When mixed with water and stirred the "sulfumate" precipitates sulphur in abundance. Moreover, the "sulfumate" evaporates in the atmosphere, the same as solutions of chloride of sulphur.

It is claimed for "sulfumate" that it is a stable compound and that its action does not vary, like that of the protochloride, with meteorological conditions. The vulcanizing action of the compound is slower than that of the ordinary protochloride solution, which permits workmen engaged in re-treating to apply the tread in large sections at a time. If a piece of crude rubber is dipped into the "sulfumate," it at first softens slightly, which proves that the liquid impregnates the mass regularly, such action being favorable to the uniformity of the vulcanization. Soon, however, the rubber sets, giving a very dense product.

It may be asked what is the cause of this particular property of this product, the slowness of its vulcanizing action? Undoubtedly its low content of chloride of sulphur. It may also be, says M. Allard, that the camphor which the product seems to contain, in a smaller quantity, has a tendency to retard the action of the chloride of sulphur on the rubber. This, however, remains to be proved. The late Dr. Weber, in writing on the Parkes process, said: "The present method of vulcanizing rubber by means of chloride of sulphur is very irrational, as it cannot lead to a homogeneous vulcanization. A process permitting homogeneous vulcanization, by means of chloride of sulphur, would be of incalculable practical value."

However valuable this "sulfumate" may prove to be, ultimately, it is likely to be received at first with some caution. To be wholly frank, those who use the cold curing solutions such as are sold in small packages and made up of new and secret combinations of sulphur, chloride and bisulphide of carbon are growing wary. They have been bitten more than once, and while sulfumate of camphor may be excellent, it will have to be proved so before it is widely adopted.

RECLAIMING AND REPAIRING PROCESS.

MR. T. GARE, of New Brighton, England, has established a small factory at Hazel Grove, near Stockport, England, to develop a new patented process for reclaiming and repairing old rubber articles and altering the shape of new articles of rubber already vulcanized. For example, he takes an old worn solid tire, puts it in a mold together with powdered solid tire scrap, and by intense heat and pressure fuses the mass and turns out a new solid tire "apparently better than the original." This better appearance is due to the fact, so he says, that any first mixing, however well done, is not homogeneous. His high heat completes the mixing, while the pressure prevents the rubber from being injured. The process is applicable to heavy molded

goods only. Just how he gets pressure in the mold when the mass fuses without a part of the contents escaping by the "spewing vents" does not appear.

It is gossiped that the Dunlop syndicate offered Mr. Gare £100,000 for his invention, which he refused, as he desires to license individual manufacturers to use his process rather than tie it up to one concern. It is further rumored that Charles Macintosh & Co. and David Moseley's Sons have looked into the process and may use it.

THE SYNTHETIC RUBBER SITUATION.

WRITING in the London *Daily Mail*, Ferrar Fenton expresses surprise at the unbelief expressed by some experts as to the possibility of producing synthetic rubber. The study of this, he says, has afforded a fascination for him for forty years, and ten years ago he succeeded in producing a synthetic rubber which added to the life of pure gum. Wishing to satisfy himself that his samples would stand the test of time, he holds them to-day looking as good, he says, as when they were made. Mr. Fenton writes that two years ago he established a factory in the United States, to work out his latest invention in synthetic rubber, and "the success of which is already assured." Mr. Fenton does not happen to mention what was formerly called Fenton's Patent Artificial India-Rubber Syndicate, Limited, which in 1888-89 was doing business in England, but which has not been heard of in the trade for several years. He visited the United States in May, 1906, in connection, it is understood, with the formation of the National Co., at Chicago, to work his patents in this country.

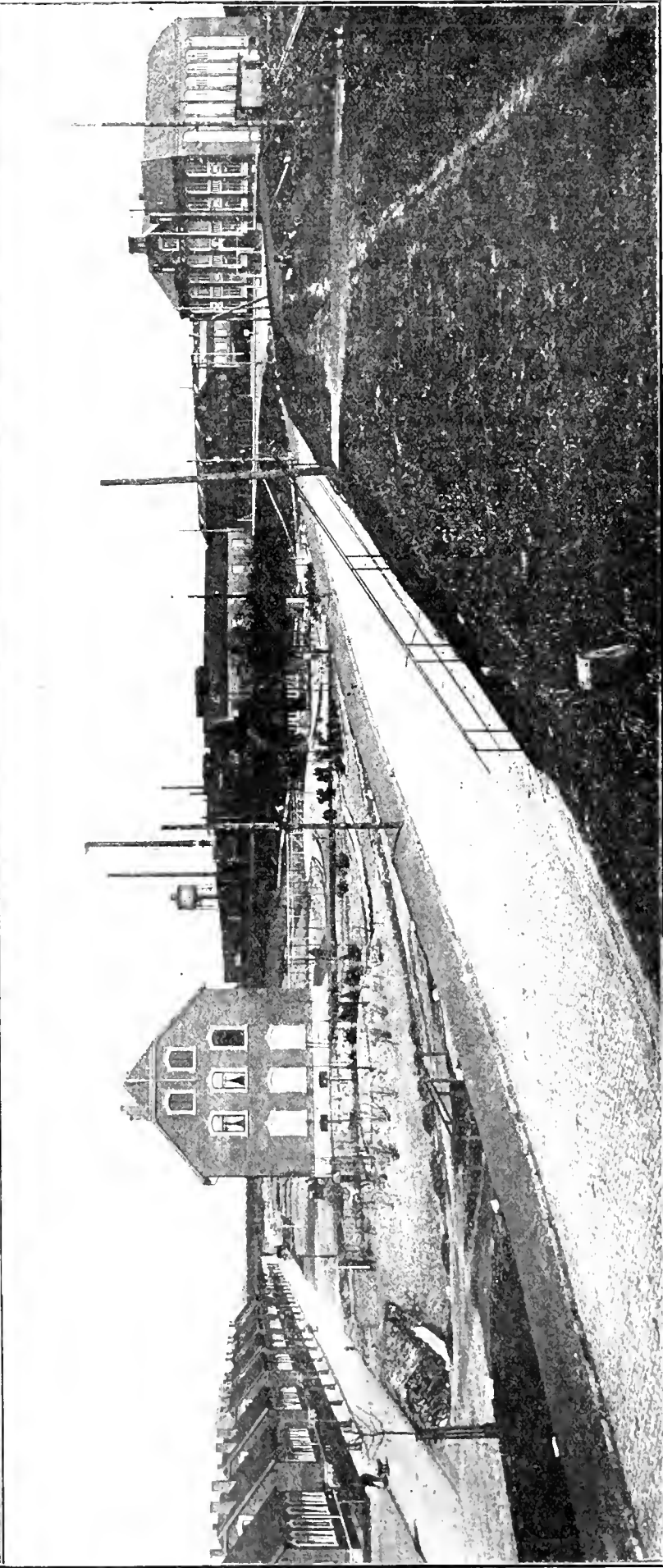
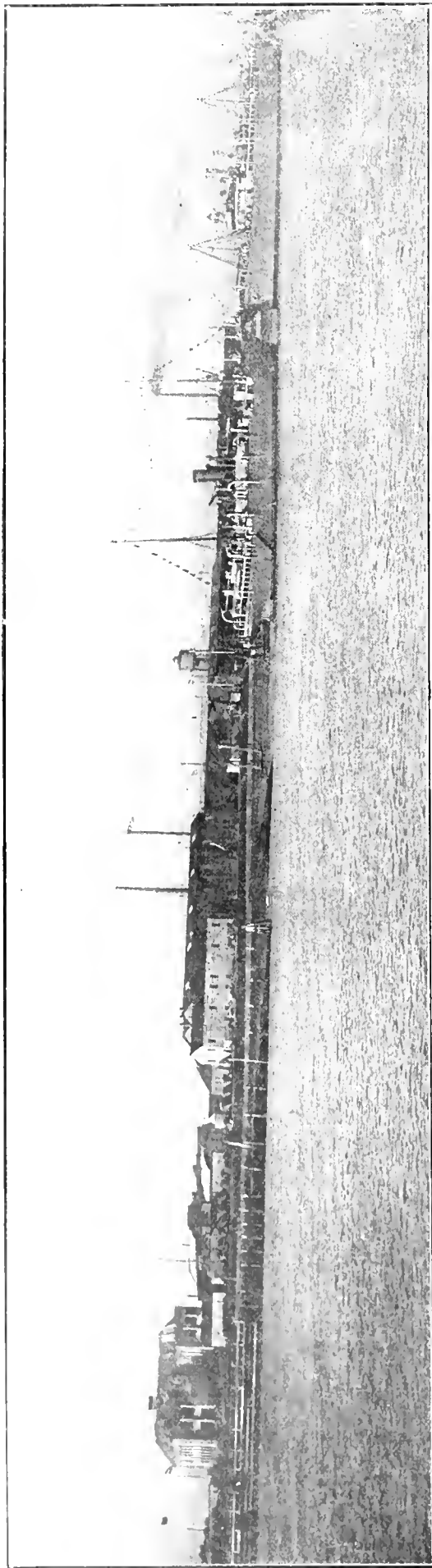
Now that Mr. Fenton is really at work it is of interest to consider what his product really is. The product which he brought out ten years ago, and which it is fair to suppose he thought was synthetic rubber, was made of oxidized oil mixed with tar and treated with dilute nitric acid. The resultant mass was about as resilient as Roquefort cheese and not as pleasantly odored. It was not rubber; it did not look like, smell like, compound like, or act like rubber. It was an oil "sub." pure and simple, and for the sake of Mr. Fenton, who doubtless is an honest but mistaken gentleman, it is to be hoped that it is a fairly good one.

THE SYNTHETIC RUBBER CO.

A LONDON firm of brokers in rubber planting shares reports "In good quarters it is told that an American syndicate has been formed for the manufacture of rubber by a certain chemical process which has been discovered. The names of strong people are mentioned as being members of the syndicate, and to its formation is attributed the recent weakness of the price of rubber and of rubber companies' shares." This undertaking is presumably that mentioned in the last INDIA RUBBER WORLD (page 88) as having been registered in London as the Synthetic Rubber Co., Limited. In answer to inquiries that have been made as to whether this is connected in any way with the Pará Rubber Co. (Bayonne, New Jersey), it can be stated authoritatively that the London company have no relation whatever to the processes of Mr. G. E. Heyl-Dia.

THE Japan Celluloid Co. have begun the construction of a factory at Aboshi. The company's head office is in London, and considerable of the \$2,000,000 stock has been taken in England and Germany. It is expected that the company will be able to manufacture a ton of artificial silk and three tons of celluloid per day. Suggestions have not been wanting that the Japanese may yet seek to utilize their control of the raw material to capture also the celluloid manufacture.

A PETITION in bankruptcy has been filed against the Da-an-Nite Auto Supply Co., of New York. Among the creditors are three tire making firms, with claims aggregating \$5845.



NORDDEUTSCHE SEEKABELWERKE, AKTIENGESellschaft (NORDDEUTSCHE SEEKABELWERKE).
[The upper view shows the works and cable steamers; the lower another factory view and workmen's dwellings.]

Germany's Submarine Cable Industry.

THE first effect of the study of any branch of seafaring is to emphasize the supremacy of the Mistress of the Seas.

This is particularly true of the submarine cable industry, where the supremacy of England has been most absolute, and has been maintained since the beginning of the industry.

There are many and good reasons for this ancient monopoly; but believing that competition is the life of trade, THE INDIA RUBBER WORLD has watched with much interest the recent growth of a serious competitor in Germany. The immediate result has been a rapid increase and a renewed interest in sea cable making and laying, which have led to many technical improvements and to a search for other insulators to take the place of the rapidly waning supply of gutta-percha. The excellent chemical and technical ability of the Germans, when applied to this industry, will probably result to the lasting advantage of the world.

The sea cable industry of Germany is represented by the Norddeutsche Seekabelwerke Aktiengesellschaft, located on the Weser river. The founders of this great company fully realized the seriousness of their task, in competing with the Thames; but they laid their plans so carefully and won the support of such large interests, that the business could probably be carried on without the direct support of the German government.

The physical side of the industry consists primarily of wire, insulation, and ships. The contributors to the Norddeutsche Seekabelwerke were the Felten & Guillaume "Carlswerk," Aktiengesellschaft, one of the greatest electrical wire making firms in the world; Franz Clouth, of Cologne, who ranks among the largest manufacturers of rubber and gutta-percha goods in the world; and the Norddeutschen Lloyd (the North German Lloyd steamship company). The German government offered the company the whole of its trade, gave them suitable tariff protection, and helped them in other ways. As a result, besides the distinction of being the only company in the world manufacturing sea cables exclusively, they have never been able to fill all the orders given them in the nine years of their existence. Besides the government orders they have acquired some business from abroad. The rapidity of their growth has been such, that, judging from this alone, the company may be said to be only at the beginning of its career.

The Norddeutsche Seekabelwerke Aktiengesellschaft was founded May 27, 1899, with an authorized capital of 2,000,000 marks [= \$476,000]. Felten & Guillaume, Franz Clouth, the North German Lloyd Co., and the Deutsch-Atlantische Telegraphen-Gesellschaft were its principal backers. The Land- und Seekabelwerke Aktiengesellschaft was very soon bought, and a cable ship was ordered in England. Work was also begun on the great plant at Nordenham, near Bremerhaven, convenient to the North German Lloyd shipyards.

The company's first cable ship, the *Von Podbielski*, was launched at Glasgow in the fall of 1899. The company had already received an order from the German postoffice for 292 miles of cable to connect Tsingtau and Shanghai. Felten & Guillaume made this cable, as the Nordenham works were not yet in operation, and the *Von Podbielski* started on her long trip to China. It was a romantic beginning for the company. The ship did her work well, and arrived in the Weser again on February 10, 1901, starting out almost immediately to repair the first German-American cable. This first cable was, of course, made in England, and laid by the English, though owned by the Germans. While it was being repaired, the Norddeutsche company were at work on their first Nordenham product, the Borkum-Bacton cable, connecting England and Germany. This was a high class four-core cable, and it was laid by the *Von Podbielski* in the spring of 1901.

The company had now received several other orders, and

these, together with needed docking improvements and the extension of the plant, justified an increase of the capital to 4,000,000 marks [= \$952,000].

The most sanguine hopes of the company were now fulfilled by an order from the Deutsch-Atlantische Telegraphen-Gesellschaft for a second cable to be laid between Germany and the United States. On the strength of this the capital of the company was raised to 6,000,000 marks [= \$1,428,000]. The Nordenham works were extended and a second cable ship was ordered from the Stettiner Maschinenbau-A.G. "Vulcan," in Stettin-Bredow, in the early part of 1902. This ship, the *Stephan*, was launched in December, 1902. The headquarters of the company were also transferred from Cologne to Nordenham, and during the whole of 1903 the best efforts of the directors and the 420 workmen were spent in the preparation of the great Atlantic cable, whose total length, from Borkum to the Azores and to New York, is nearly 5,000 miles.

The *Stephan* was only delivered to her owners on March 16, 1903, and she and the *Von Podbielski* immediately began laying the cable. Though a new and untried ship, the *Stephan* worked 205 days out of the 290 days left in 1903. Both ships made two trips during that year, and on April 16, 1904, the *Stephan* left Nordenham for New York, with the last stretch of cable, which measured 2,446 miles and weighed 4,100 tons. Laying from Coney Island outward toward Horta, to meet the *Von Podbielski*, the *Stephan* laid the last lap of the cable at the rate of ten miles an hour in water over 16,000 feet deep, and finished the job in four months under the contract time.

Meanwhile the Norddeutsche Seekabel Aktiengesellschaft had received an order for another cable, which was destined to reflect even more credit upon the company than even the Atlantic cable had done. This order came from the Deutsch-Niederländische Telegraphen-Gesellschaft, a Cologne corporation, and was to connect Shanghai, China, and Menado, Celebes islands, with Yap, in the Loo Choo islands, and connect thence with the American Pacific cable at Guam, in the Samoan islands, a total length of 4,238 miles. While this cable was being made, the Dutch government ordered a cable to connect Borneo and Celebes islands. The Norddeutsche company made this cable, and sold their old ship, the *Von Podbielski*, to the Dutch government. Her name was changed to the *Telegraaf*, and as such she laid the Borneo-Celebes cable. In her stead the Norddeutsche company ordered a third ship, the *Grossherzog von Oldenburg*, from F. Schichau, in Danzig, and have since used her for a cable repair ship, leaving the *Stephan* free for cable laying.

The company have also filled other important orders, such as connecting Constanza and Kilis, Turkey (245 miles); Cuxhaven and Arendal, Norway (409 miles), and the Moen-Libau-St. Petersburg cable (940 miles), besides making spare cables and repairs; but none of these were brilliant enterprises, compared to laying the Shanghai-Menado-Yap-Guam cable. To carry this great cable, weighing, in all, nearly 9,000 tons, the *Stephan* had to make two trips to the Orient, and she laid it over a rough sea bottom, reaching, at times, a depth of 22,750 feet. On the whole it was a record-breaking performance, which brought great credit upon the Norddeutsche Seekabelwerke Aktiengesellschaft from scientific men all over the world, and was regarded by the home government as a triumph for German enterprise.

While the ultimate purpose of the German sea cable company, of course, was to yield profits, they exerted themselves first to build and lay cables, leaving the distribution of dividends to a later period. The first dividend was declared at the end of sixth business year (1904), amounting to 8 per cent., the capital issue being then, as now, 6,000,000 marks. The dividends

for 1905 amounted to 15 per cent. and for 1906 to 5 per cent.—a total for the three years of 1,680,000 marks [=£390,840], besides which substantial reserve funds have been created. The assets of the company at the end of 1906 amounted to 9,450,689 marks [=£2,250,692].

Of the illustrations on an accompanying page the one uppermost gives a general view of the company's works, at Nordenham on the Weser, with their cable steamers *Stephan* (on the left) and *Grossherzog von Oldenburg* seen from the river. The view below is a front view of the factory and (on the left) the workmen's dwellings. The company's board to-day embraces Max von Guillaume and Dr. Emil Guillaume, both of Felten & Guillaume, and Franz Clouth, the Cologne rubber manufacturer.

RUBBER INTERESTS IN EUROPE.

DUNLOP MANUFACTURING PROFITS.

THE accounts of the Dunlop Rubber Co., Limited for the twelve months ended August 31, 1907, show net profits of £300,058 [=£1,460,232.26], which enabled the management to declare a dividend of 100 per cent. The Dunlop Rubber Co. is a subsidiary company of the Dunlop Pneumatic Tyre Co., Limited, and may be described as constituting the manufacturing division of the latter. Its capital is £220,000 [=£1,070,630], in £1 shares, of which 181,181 are held by the Dunlop Pneumatic Tyre Co. The remaining 38,119 shares, not issued until last March, are held by individual shareholders in the Pneumatic Tyre company. It is stated that the total investment to date by the tire company in the manufacturing company has been £225,437, while the dividends have amounted to £586,881, or more than twice the amount of the investment. The market value of the 181,181 shares now held by the tire company was stated recently at about £1,273,167. The Dunlop Rubber Co. was operated for the first year at a loss of £724 15s. 7d., since which time the yearly profits have been:

In 1901	£14,097	In 1904	£157,517
In 1902	54,854	In 1905	144,497
In 1903	88,823	In 1906	209,969

The Dunlop Pneumatic Tyre Co., Limited, originally was a tire selling concern, based upon a patent monopoly. Foreseeing that the expiration of the patent would leave them with no substantial foundation, the directors in time adopted the policy of reserving a part of the annual profits for building up a business as rubber manufacturers, which might hope to continue without reference to the tire patents. How successful the new enterprise has been is shown in the business report summarized above. The sources of income of the Dunlop Pneumatic Tyre Co. to-day, apart from the profits as a tire selling concern, are derived also from the manufacturing as carried on in England and also in France and Germany.

GREAT BRITAIN.

THE steamer *Mauretania*, the latest addition to the Cunard line, was fitted with rubber tiling by the India-Rubber, Gutta-Percha and Telegraph Works Co., Limited, of Silvertown.

George Spencer & Co., Limited (lately Spencer, Moulton & Co.), whose factory at Bradford-on-Avon is among the oldest rubber works in England, being identified particularly with the manufacture of railway supplies, have taken on the production of high grade automobile tires.

The Scott Non Skid and Tyre Co., Limited, was registered in London November 6, 1907, with £4000 capital, to adopt an agreement with H. J. Scott, and manufacture non skid appliances for tires of motor cars.

The Whitfield Automatic Tyre Inflator Co., Limited, was registered in London, November 4, 1907, with £5000 capital, to acquire all rights in the United Kingdom and elsewhere for the Whitfield automatic tire inflator.

Claudius Ash, Sons & Co. (1905), Limited, paid on December

1 an interim dividend at the rate of 6 per cent. per year on the ordinary shares, for the half year ending June 30 last.

At the recent Olympia Automobile Show, in London, the number of Dunlop tires fitted to cars on exhibition was 1205, in a total of 2181 tires on all the cars.

Howison & Co., Limited, was registered in London, November 26, with £5,000 [=£24,332.50] capital, to acquire the business carried on by R. M. Howison, at 26, City road, E. C., as Howison & Co., dealers in tires and accessories and other rubber goods. Mr. Howison was in the American rubber trade some years ago, first in Boston and later at Hartford.

Universal Motor and Tyre Co., Limited, was registered in London November 26, with £5,000 [=£24,332.50] capital, to carry on the business of tire making and repairing.

The Waverley Rubber Works Co., Limited, having a water-proofing factory at Murrayfield, Edinburgh, have decided to go into voluntary liquidation. The company began business as the Waverley Rubber Co., in 1889, being founded by Mr. J. G. Laird, who has been identified with the business to this time.

GERMANY.

A COMPANY has been registered at Hamburg under the style Prowodnik Import Gesellschaft m. b. H., to deal in the products of the Russian-French Rubber Works "Prowodnik," of Riga, Russia. The capital stated is 100,000 marks, and Hermann Carl Sörnsen is in control.

The betrothal is announced of Dr. Friedrich A. Traun, of Dr. Heinrich A. Traun u. Söhne, hard rubber manufacturers of Hamburg and Harburg, Germany, and Fräulein Friedel Preetorius, daughter of Kommerzienrats Wilhelm Preetorius and wife, of Mainz.

ITALY.

IN a reference to the Italian rubber factory of Pirelli & Co., at Milan, in THE INDIA RUBBER WORLD November 1, 1907 (page 38), Doctor Alberto Pirelli, a son of the founder and head of the business, was mentioned as taking active charge of his father's business. It should be added that another son, Piero Pirelli, is also a managing director of the company, the two jointly taking charge of its affairs.

RUSSIA.

THE net profit of the Russian-American India-Rubber Co., at St. Petersburg, for the business year 1906 is stated at 5,045,796 rubles [=£2,508,584.95], and a dividend of 26¼ per cent. has been declared.

The imports of raw india-rubber and gutta-percha in 1905 are stated at 358,000 poods [=12,928,096 pounds] and in 1906 at 462,000 poods [=16,683,744 pounds].

The Moscow factories of F. Reddaway & Co.—the parent house of which is at Manchester, England—employ close on to 1000 hands, chiefly on oil cloth, leather cloths, and "Camel's Hair" belting, but do not make any rubber goods, as does the factory in England. The Russian house has branches at St. Petersburg, Kieff, Saratof, Warsaw, and elsewhere, at each of which places the postal address is F. Reddaway & Co. Mr. Reddaway devotes a considerable part of his time to the conduct of his business in Russia.

HASKELL GOLF BALL IN ENGLAND.

IN the British house of lords, on November 9, arguments in the appeal by the plaintiffs in the case of the Haskell Golf Ball Co. v. Hutchinson, Main & Co., Limited, were heard. This was an action for infringement of patent, heard originally in the high court of justice, chancery division, in London, in May and June, 1905, when Mr. Justice Buckley rendered a decision adverse to the patent. An appeal was filed by the Haskell company, and in the court of appeal, on March 7, 1906, the full bench concurred in the finding of the lower court. The case was carried next to the house of lords, where a final decision was delivered on November 25, also adverse to the Haskell patent.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent

BEFORE these lines are printed the financial atmosphere may have ceased to exert its baneful pressure upon business operations generally, but at the time of writing it is the main topic of conversation. Of course, raw rubber is not the only commodity that has experienced a rapid fall in price,

RAW RUBBER SITUATION.

but it is the one which has the best claims for notice here. Though a fall in values at this season was expected by the trade, nothing so sensational was looked for, and it is not surprising that those who have rubber still to be delivered at prices 1 or 2 shillings above the present market price are excessively chagrined at the turn affairs have taken. And during the last few weeks, when values have been declining day by day, the purchaser has found great difficulty in making up his mind what to do. Of course it is well known that it is the large stock of rubber at Liverpool kept there by the tightness of money in New York that is the main cause of the slump; if it was thought to be due to overproduction a slump would assuredly have set in with regard to rubber planting shares. With respect to the latter comparatively little change has taken place, not that anxiety has not manifested itself, but rather from inside advice to shareholders not to give way to panic and thus to initiate a disastrous fall in the value of shares. The rubber share market may be considered as marking time, there being very little business doing.

As far as the rubber trade generally is concerned there would of course be nothing to regret if the fall in prices of the raw material were the only factor in the existing situation. This is not so, however, because it is evident that the recent boom in trade is waning. Perusal of the share lists of motor car and cycle companies shows that things are in anything but a good way, and things are somewhat *in extremis* in the shipbuilding trade on the North East coast. The bad weather of the past summer is held responsible for the large decline in the sale of motor tires compared with 1906, a decline which if it were brought home to them would assuredly surprise those who predicted a large yearly increase in the demand for rubber in this direction. With regard to the general question of increased demand, I certainly cannot see eye to eye with those who seem to think that the demand for rubber goods will show an indefinite expansion in rates to the fall in price which may be expected when all the plantations come into bearing. I see that a writer was quoted in the November issue of this journal as saying that in 1920 the yield of cultivated rubber would be about 75,000 tons, or more than the present total consumption. If no increase in the supply of wild rubber takes place this means that there will be 150,000 tons available per annum. The writer of the above forecast does not foresee any difficulty in disposing of this, but everybody will not share his optimism.

Apropos of this I see that at the most recent meeting of the Rubber Plantations Co., Limited, Mr. F. A. Covett gave it as his opinion that the planting business was being overdone, and that if more companies are brought out it will not only result in such low prices as will put wild rubber out of the market, but that it will also mean internecine competition between the various companies resulting in loss of money all round. This prophecy is by no means a wild one, though it may not prove palatable to the financial groups in London engaged in exploiting planting propositions. Mr. Govett, however, is by no means alone in his prognostication, and I have heard many shrewd business men say that the thing is being overdone. Of course no one foretells disaster in the immediate future; it is only its

eventuality which is emphasized. Meanwhile there is cessation of activities among the would-be substitute manufacturers. I hear great things said of a new "synthetic rubber" shortly to come upon the market from London, and which costs 5d. per pound to make. Probably the term synthetic is wrongly used, but it is the fashion now to call substitutes by the higher sounding name.

To the best of my knowledge this branch is not carried on in any of our regular rubber works, but only in works which make

THE MEDICAL PLASTER BUSINESS.

such goods *inter alia* a specialty. Prominent among such firms are Delmas, of Leicester; William Mather & Co., Limited, of Manchester, and Edward Taylor, of Salford, Manchester. Earlier in the history of the rubber medicated plaster the fabric was sent together with certain of the materials, such as orris root, to the rubber factory, there to have the rubber mixture calendered on the fabric. This may be done to some extent at the present day, but the principal plaster factories now have their own rubber plant, the main point about this which invites notice being the change from the use of the calender to the spreading machine. The belladonna plaster, which may be taken as one of the most important, is made largely both with a rubber basis and a lead soap basis. Although the former is the more expensive, it has the advantage of greater adhesiveness and longevity when kept in stock. It is generally sold under a two years' guarantee, which is not possible in the case of the non-rubber plaster owing to liability to crack if stored for any length of time by the retailer. As mentioned in Mr. Pearson's book, the rubber medical plaster is manufactured in the United States. I have no information about the non-rubber plaster, but the fact that the latter is exported to a considerable extent from England to America, while very little of the former crosses the water, rather indicates that the non-rubber plaster is not manufactured to any extent. In this branch there is considerable variety in the textile fabric employed, some of the modern artificial leathers being also now in considerable favor.

I FEEL constrained to voice a plaint made to me the other day which seems to constitute a hard case. This has reference to

RUBBER SOLUTION.

the solution made and sold for many years by firms who use only fine rubber, especially the trimmings of cut sheet goods. They are now continually getting complaints, not about the quality of the solution, but about its high price compared with what is quoted elsewhere. I suppose it is a fact that whereas in the old days fine rubber was generally used for solution making, this is now quite the exception, cheaper brands having been substituted for it. Another point is that, except in special cases, the solution is not sold as containing a definite percentage of rubber, under which circumstances it is an easy thing for individual makers to cut the price.

For the first time in its nine years of life the accounts of this company have become public property. At the annual meeting recently held in London, Mr.

THE DUNLOP RUBBER CO.

Harvey du Cros, M. P., the chairman, gave figures showing an extraordinary prosperity, and it is not surprising that a report of the proceedings loomed large in the press. [Some details from the company's report appear in another part of this paper.] Nor is it surprising that the ordinary newspaper reader should draw the conclusion that the possession of a rubber works is equivalent to the possession of a high grade gold mine, but it need hardly be said in this journal that figures such as given out by the

Dunlop company are by no means the rule in the rubber trade. What is known now as the Dunlop Rubber Co. is the factory and business of the late firm of Byrne Brothers, at Birmingham, acquired and extended by the Dunlop Pneumatic Tyre Co., Limited, some years ago. The main point of interest about it is that it has the same board of directors as the Pneumatic Tyre company, and that it has the business privilege of supplying all the tires sold by the latter company, or at any rate all those sold under the name of Dunlop tires. Of late years, owing to the lapse of the Dunlop patents, it has been the policy of the board to extend the manufactures, and they now cover a wide range both in mechanicals and waterproof clothing. It will be remembered that the Dunlop Tyre company reorganized its capital last year, but even with the improved prospects the shareholders are in a very different position from their brethren in the rubber company. The Dunlop Tyre shares, it may be mentioned, are quoted at the time of writing at 16 shillings for 41 shares. To refer to a technical point, there can be little doubt that the acquisition of the Doughty high temperature vulcanizing patents by the Dunlop Rubber company has proved a highly profitable move, the economy of the process giving its possessor a great advantage over competitors. This is, however, only with regard to cycle tire covers, the process, it is understood, not being applicable to rubber of the thickness necessitated in motor tires.

Now that the House of Lords, the highest tribunal in the land, has given its decision against the validity of the Haskell ball patent, litigation now ceases. Naturally the great army of golfers see nothing to complain of in the way the case against Messrs. Hutchinson, Main & Co. has terminated, as the competition which must ensue between the various makers will of course be in their favor. With regard to the business of the future, it may be pointed out that although there is no patent generally as regards the use of rubber wound under tension, this does not apply to minor improvements. Several patents are now in existence involving details which the several makers claim as conferring advantages on their make compared with others. Thus the composition and physical characteristics of the solid core have been made a matter for close attention, Charles Macintosh & Co., Limited, among others, having patented a core of a special design. The best rubber cored balls still cost 2 shillings each, and those who want the best pay this price without demur, while other brands may be obtained as low as 1 shilling. A good many of the cheaper balls, it should be mentioned, are "re-made," it being a common thing for players to sell their worn balls to the professionals, who put on a new gutta-percha cover and resell at 1s. to 1s. 4d. each.

RUBBER HEELS IN ENGLAND.

AT the late International Shoe and Leather Fair, in London, rubber products were even more prominent than in former years at this important show. There were no less than 27 distinctively rubber exhibits, of which 21 were made by manufacturers of rubber heel pads. Almost without exception these displays embraced heels of the revolving type, though not confined to these alone. The popularity of the revolving rubber heel in Great Britain was dealt with at length in THE INDIA RUBBER WORLD May 1, 1904 (page 278), since which time the number of manufacturers has increased, there has been a constant addition to the patents in this field, and the volume of trade appears larger. The various exhibits also embraced rubber soles and other footwear accessories.

The India Rubber, Gutta-Percha and Telegraph Works Co., Limited, who had been making rubber heels for the trade for years, appeared as manufacturers of rubber heels under their own name, and made an extensive and varied exhibit.

Another concern, concerned hitherto with other lines of production, who appeared this season for the first time as heel makers, was Wallington, Weston & Co., the tire manufacturers of Frome.

The rubber exhibits were not confined to heels and soles, however. The North British Rubber Co., Limited, had a very complete display of rubber boots and shoes, and distributed as souvenirs miniature rubbers such as have been used as advertising novelties by some of the American manufacturers in this branch.

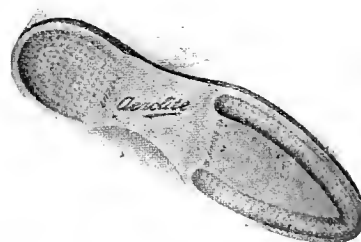
Asbest- und Gummiwerke Alfred Calmon, A.-G., of Hamburg, exhibited rubber boots and shoes, gymnasium shoes, and Chinese patterns.

Canada was represented by the British agency for the Maple Leaf Rubber Co., of Port Dalhousie, Ontario.

Several American brands of rubber footwear, including the "Boston" and "Candee," were exhibited by the United States Boot, Shoe and Rubber Co., of Goswell road, London.

The products of the Hood Rubber Co. (Boston) were shown by their European agents, C. W. Randall & Co., in London.

One American make of heels was exhibited—the "Penna" goods, marketed by Howison & Co., of London.



"AEROLITE" TENNIS SHOE.

A line of exhibits deserving special mention as novelties embraced pneumatic heels and soles. In this department was the display of "Aerolite," Limited, of Leicester. Their list included pneumatic tennis soles, of different patterns; pneumatic golf, hockey, and shooting soles; pneumatic full heels and tips; pneumatic revolving heels; and pneumatic soles and heels for light walking boots. The "Aerolite" goods have proved very popular among tennis players, golfers, and climbers. They are reported to have a good sale on the continent as well as in Britain. The illustration shows one of the patterns of the "Aerolite" tennis sole.

AMERICAN LEATHER GOODS AND THE FAIR.

Some English trade journals emphasize the absence of American exhibits of leather footwear at the Shoe and Leather Fair as indicating that there is less reason to fear an "American shoe invasion" than some writers would have the public think. Whether the measure of success of manufacturers in marketing their products in Great Britain had any influence in determining their attitude toward the Fair, it is impossible for us to say. Official figures, however, would indicate that, while the total exports of leather footwear from the United States are increasing—and the exports to Europe as a whole are growing—there is a decreasing demand for such goods in Great Britain. The figures here are for fiscal years ended June 30:

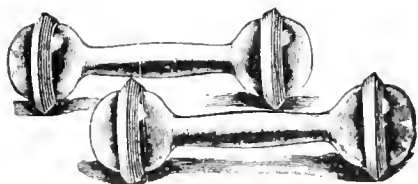
DESTINATION.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.
Total exports.	\$6,182,008	\$6,665,017	\$7,238,940	\$8,057,697	\$9,142,748
To Europe ..	2,389,905	2,672,629	2,447,368	2,472,608	2,591,144
To England ..	2,013,890	2,128,958	1,868,894	1,943,845	1,862,747

It will be seen that whereas Great Britain, five years ago, bought 32 per cent. of the American exports of leather footwear, the percentage was only 20 in the last year for which details are available. Meanwhile the sale of such goods is increasing in Germany. Like conditions apply to the American rubber footwear trade—an increase in the total, with a falling off in the British demand.

New Rubber Goods in the Market.

DUMB BELLS WITH RUBBER BANDS.

DUMB BELLS, in a great variety of sizes and kinds, are a part of the equipment of every public and private gymnasium, while many men and women who never enter a gymnasium swing the dumb bells every day as a desirable form of exercise. The small amount of space that a set requires makes it possible for the individual to have them in some convenient place when a more elaborate exercising apparatus would be out of the question.

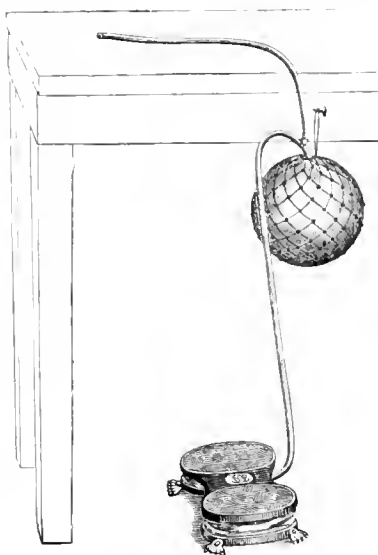


NICKEL PLATED DUMB BELLS WITH RUBBER BANDS.

These shown in the illustration are especially practicable and easy to handle, while they are not without their decorative features. The rubber bands make them easy to keep in place and the sliding, which often makes them something of a care to set aside, is prevented by the application of these bands. Nickel plated sets come in one, two, three, four and five pound weight. [A. G. Spalding & Brothers, Nos. 124-128 Nassau street, New York.]

DOUBLE ACTION FOOT BELLOWES.

THIS apparatus, for use in the dentist's operating room, is of English pattern, and consists of a double bellows, a rubber reservoir and the necessary tubing. The bellows is operated by an "easy, rocking motion" of the foot, one side being always in action; thereby a continuous flow of air is supplied, this being sufficiently powerful for any blowpipe used for dental purposes. The pressure is further equalized by the rubber reservoir, making the blast even and steady. A check valve in the outlet of the bellows prevents the air from being forced back through the bellows when the foot action is temporarily suspended. This makes it possible for the dentist to lay down the blowpipe momentarily, should his attention be diverted, and the work be resumed without loss of time that would be otherwise entailed. [The S. S. White Dental Manufacturing Co., Philadelphia.]



DENTISTS' FOOT BELLOWES.

A PNEUMATIC HELMET.

TRACK cycle racing, paced by motor bicycles, which is still in vogue in various parts of Europe, ranks among the most dangerous sports of the day. This sport particularly is referred to as having been the cause of bringing into existence the pneumatic helmet, which consists of a leather cap shaped like a football, containing a rubber bladder. This is pumped up, and if the motor-cyclist is precipitated against a wall the rubber buffer saves his neck.

"GORDON" ADJUSTABLE DUST HOOD.

A DUST HOOD that has an extension over the back of the rear seat is one of the comforts now offered to autoists. This prevents the dust from coming up from behind into the car, so that the occupants of the rear seat are always free from dust when the dust hood is used. These hoods are marketed in four sizes. Each size is adjustable several inches, this adjustment being acquired by means of an elastic cord. The largest size fits tops from 75 to 78 inches across; the next size is for tops from 70 to 74; while the small touring car size fits tops from 64 to 68 inches. There is also a runabout size for tops from 54 to 58 inches.



"GORDON" ADJUSTABLE DUST HOOD.

These tops are made in melcion cloth, artificial leather, and rubber. [Vehicle Apron and Hood Co., Columbus, Ohio.]

OLT'S "O. K." HARD RUBBER DUCK CALL.

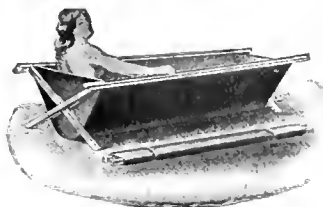
THE principal thing to be considered when choosing a duck call is its naturalness. If its sounds will "bring them in," the game is as good as bagged. With the call here illustrated there is a patent tone slide whereby the tone can be changed at the will of the sportsmen to suit weather conditions, different kinds of ducks, and so on. Aside from the success that such a call is sure to be in attracting the game, there is something even more subtle in its hold upon the hunter—that of seeing the ducks assemble and watching them obey his will in the close imitation he is able to make to their own calls to their kind. This little call is made of hard rubber and is said that it will not swell, crack, or freeze shut in any kind of weather. It is convenient, too, because of the fact that its adaptability makes it unnecessary for the hunter to carry more than one kind of call. It is simply arranged, all that is necessary to do when wishing to change the call being to push the slide with the finger only a little either way, which will make the desired change. Should dirt or sand get into the call by pulling out the plug and lifting up the reed it may be blown out. [Philip S. Olt, Pekin, Illinois.]



OLT'S "O. K." DUCK CALL.

IRWIN'S FOLDING BATH TUB.

THE illustration herewith shows how simple is the matter of a bath when a fixed bath tub is not available and one wishes something more than the ordinary sponge. This tub rests squarely on the floor, thus removing all danger of tipping. The frame is made of white ash, finished and varnished, and is bolted and hinged together without any separate parts. The length of the tub is 5 feet, inside, by 27 inches in width, and is 10 inches deep. These are about the dimensions of the ordinary fixed tubs. When folded these tubs are 5 feet long, and 5 inches square, and they weigh 16 pounds. The covering is of a single piece, in which



IRWIN'S FOLDING BATH TUB.

there are no cuts or seams, and is made of heavy, closely woven duck, rubber coated especially for these tubs. The material not being injured by salt, sulphur or medicated waters, it is possible to take a medicated bath; or, if looped up in the center, the tub serves as a sitz bath. The tub is emptied by simply taking hold of the rails and lifting at one end, the other end forming a trough by which the water is poured into a pail. [Russell M. Irwin, No. 103 Chambers street, New York.]

"BUBBLE-QUICK" HEATER.

The "Hygeia" nursing bottle, for which this heater is especially designed, has already had a special holder patented for it, and now with the heater it would seem that the outfit is nigh completion. Some genius has computed the number of times the nursing bottle has to be heated the first year, and makes it 2,500. Any device which will lessen the labor and worry involved in this number of operations is naturally assured of a welcome. The construction of this heater demonstrates the principle of a large heating surface and a small quantity of water to heat. According to this principle there is but a thin sheet of water surrounding the bottle, and the water also fills the broad shallow base which has both upper and lower plates deeply corrugated. It can be used over an ordinary gas jet, giving the light at the same time, as well as over a gas stove. The time required for heating depends upon the temperature and amount of milk and the means of heating, varying from 60 to 90 seconds. [The Hygeia Nursing Bottle Co., Buffalo, New York.]

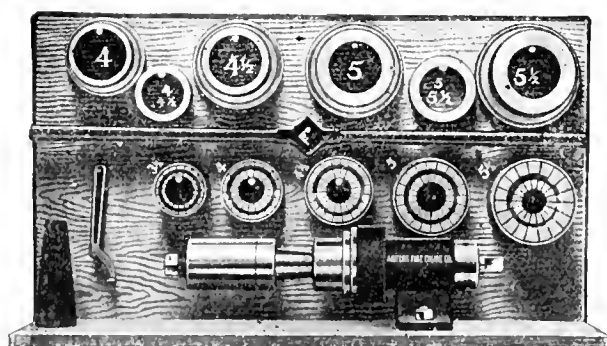


"BUBBLE-QUICK"
HEATER.

The time required for heating depends upon the temperature and amount of milk and the means of heating, varying from 60 to 90 seconds. [The Hygeia Nursing Bottle Co., Buffalo, New York.]

"CONTINENTAL" HOSE EXPANDER.

The "Continental" Hose and Suction Expander, shown in the illustration, is a tool for attaching couplings to suction and other large hose where inside diameters range from 3½ to 6 inches. This expander is supplied with an adjustable gauge and auto-



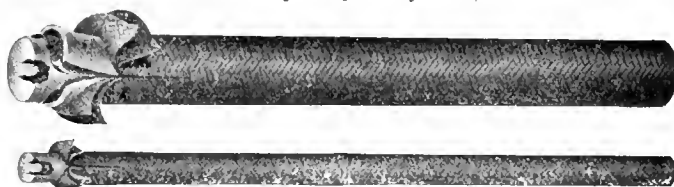
"CONTINENTAL" HOSE EXPANDER.

matic release, the various segments are interchangeable and any one or more of the sizes within the range of the tool can be supplied at any time. It is compact and convenient, and has many advantages in its favor. [The Ahrens Fire Engine Co., Cincinnati.]

"EMPIRE" AUTOMOBILE ELECTRIC WIRES.

The "Empire" secondary wire, for automobile use, is so constructed that it may be subject to much hard usage, not to say abuse, without making it unfit for service. The cable is covered with a rubber stock designed to resist high voltage, and this in turn is covered with a braid, outside of which is placed a rub-

ber stock that is absolutely oilproof, and two braided jackets are placed over all. The "Empire" primary wire, which is also illus-

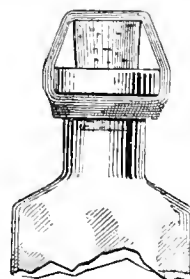


"EMPIRE" AUTOMOBILE ELECTRIC WIRES.

trated in the smaller cut, is insulated with oilproof rubber, and finished with two braided jackets. [Empire, Automobile Tire Co., Trenton, New Jersey.]

"THE CORKER."

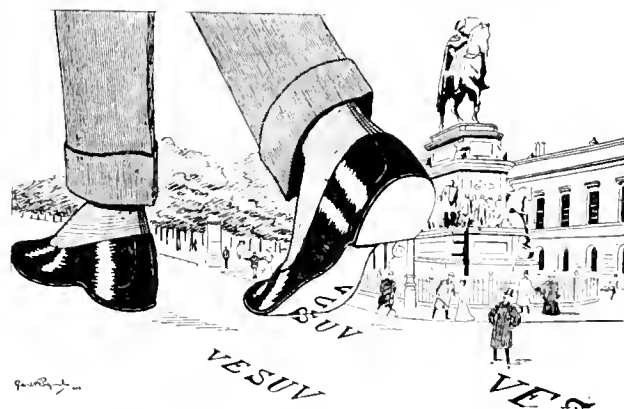
The device here illustrated is simply a device formed of strong, fine, pure rubber, in the shape indicated by the darker portion of the cut. It slips on any bottle, over any cork, and is designed to keep medicines or the like from spilling, evaporating, or concentrating. Its use is better than tying pieces of paper or cloth over bottle corks when traveling, to prevent spilling the contents and spoiling everything in a grip or trunk. "The Corker" corks the bottle instantly and securely. It is sold very generally by druggists. [O. B. Schellberg, No. 217 East Twenty-seventh street, New York.]



"THE CORKER."

ADVERTISING ON THE ROADWAY.

THE illustration here does not relate to any particular kind of footwear, rubber or otherwise; it merely records the suggestion of some clever man in the advertising field of the possibility of utilizing shoe soles for a new purpose. Were the suggestion to be adopted generally, while every man might not leave behind him "footprints on the sands of time," he would leave somebody's advertisement every time he stepped upon a sanded or dusty roadway. In an early issue of THE INDIA RUBBER



WHY NOT RUBBER SOLES FOR ADVERTISING?

World an illustration was copied from a contemporary pointing out how bicycle tires might be used for advertising purposes by means of raised letters on the tread. More recently a leading maker of bicycle tires in England began branding or lettering the tires on the tread, with the incidental idea of advertising them on the road surface wherever they ran. Whatever the advertising value of the idea, it was copied by other makers, with the result that the matter got into the courts of justice. The cut here presented is a feature of the advertising of Albert Theilgaard, of Copenhagen, in the reclaimed rubber trade, for calling attention, by name, to his brands.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED NOVEMBER 5, 1907.

- N**O. 860,800. Portable rotary bathing and massaging machine. C. F. Faupel, Chicago.
- 860,070. Rubber overshoe. H. C. Mason, Providence, R. I.
- 870,013. Vehicle tire. A. W. Butler, Brockton, Mass.
- 870,044. Belt and belting. D. Nottenstrom, assignor to United States Chemical Rubber Co., both of Chicago.
- 870,171. Spring cushioned automobile wheel [with rubber cushioning devices]. W. A. Hill, assignor of one-half to V. Scheidell and G. Meyer, all of Callicoon, N. Y.
- 870,248. Pneumatic tire [with removable flanges bolted to the wheel felloe]. H. A. Palmer, Akron, Ohio.
- 870,290. Tapping knife for rubber trees and the like. [Described in THE INDIA RUBBER WORLD, April 1, 1907--page 210.] C. A. Leshner, Scomusco, Mexico, assignor to La Zacualpa Rubber Plantation Co., San Francisco.
- 870,323. Elastic tire for vehicle wheels. G. E. N. I. E. Subra, Paris, France.
- 870,325. Pneumatic renovator [for carpets and the like]. J. S. Thurman, St. Louis.
- 870,349. Process of producing compounds containing rubber and fiber. F. M. Ekert, Akron, assignor to The Ekert Fiber Co., Cleveland, Ohio.
- 870,367. Glue. [In some forms may include rubber.] G. Kelly, Hinsdale, Ill.
- 870,395. Apparatus used for milking cows. W. J. Teese, Balaciava, Victoria, assignor to W. H. Blackham, Melbourne.
- 870,407. Fresh air conveyor [for sleeping rooms and the like]. K. Anthony, Wilmerding, assignor of one-half to A. L. Trevaskis, Turtle Creek, Pa.

Trade Marks.

- 26,463. The Hartford Rubber Works Co., Hartford, Conn. The words No. 77. For rubber tires.
- 27,786. American Lead Pencil Co., New York city. Cut of a pencil with eraser. For lead pencil holders.
- 29,534. Scandinavian Fur and Leather Co., New York city. The letters S. F. L. C. For rubber automobile apparel.
- L. Candee & Co., New Haven, Conn. The following, for marking the kinds of goods specified:
- 30,007. The word *Federal*. For rubber footwear.
- 30,008. The word "*Candee*." For rubber footwear.
- 30,009. The word *Candee* in a circle. For rubber footwear.
- Woonsocket Rubber Co., Woonsocket, R. I. The following, for marking the kinds of goods specified:
- 30,012. The word *Woonsocket* in a semicircle. For rubber footwear.
- 30,013. The words *Rhode Island Rubber Co.* in a circle, with the letters U. S. A. in the center. For rubber footwear.
- 30,014. The word *Atlas*. For rubber footwear.
- Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. The following, for marking the kinds of goods specified:
- 30,023. The word *Armor* in a semicircle. For rubber footwear.
- 30,024. The word *Acme*. For rubber footwear.
- 30,025. The word *Connecticut*. For rubber footwear.
- 30,019. National India Rubber Co., Bristol, R. I. The word *Colonial*. For rubber footwear.
- 30,167. Hood Rubber Co., Boston. The word *Tuesday*. For rubber tires and rubber footwear.

ISSUED NOVEMBER 12, 1907.

- 870,548. Tire shoe. G. Dentzeau, West New York, N. J.
- 870,656. Detachable tread for pneumatic tires. C. B. Woodworth, Newton, Mass.
- 870,657. Traction attachment for vehicle tires. *Same*.
- 870,763. Hose band. F. W. Chaffee, Albany, N. Y.
- 870,770. Rubber tip and means for securing it. [For furniture legs.] H. Fuller, Stockbridge, Ga.
- 870,785. Milking apparatus. M. E. Jacques, Buffalo, N. Y.
- 870,796. Tire protector. R. Parker, New York city.
- 870,804. Life saving suit. M. A. Tieck, Denver, Colo.
- 870,844. Armor for tires. G. Powell, Newark, N. J.
- 870,981. Vacuum cleaning system. F. J. Matchette and R. Raddatz, Milwaukee, Wis., Raddatz assignor to Matchette.
- 871,003. Hose nozzle. W. A. Teall, Eau Claire, Wis.

Trade Marks.

- Bleistiftfabrik vormals Johann Faber, Actiengesellschaft, Nuremberg, Germany. The following, for marking the kinds of goods specified:
- 9,819. The words *Johann Faber*, preceded by crossed hammers. For pencils and erasers.
- 9,819. The word "*Adonis*." For pencils and erasers.
- Morgan & Wright, Detroit, Mich. The following, for the kinds of goods specified:
- 29,397. The word *Cataplano*. For rubber tires.
- 29,400. The picture of a seal in an oval with the word *White* above and the word *Seal* below. For rubber packing.
- Hazen-Brown Co., Brockton, Mass. The following, for marking the kinds of goods specified:
- 29,959. The word *Foldite*. For rubber cements.

- 29,060. The word *Hold* [with the word *Fold* and above the word *Holding*. For rubber cements.
- 31,307. The M. Lindsay Rubber Mfg. Co., New York and Washington. The words *Rubber Bubbles*. For toys.
- 30,308. George Borgfeldt & Co., New York city. The word *Wingfield*, over the representation of a winged ball. For tennis balls.
- 30,431. The B. I. Gedrich Co., Akron, Ohio. The word *Pinnacle*. For rubber belting.

ISSUED NOVEMBER 19, 1907.

- 871,150. Tire. [Cushion in rimlike sections.] W. D. Baker, Brockton, Mass.
- 871,169. Pneumatic tire. I. C. Hodol, Boston.
- 871,156. Hose nozzle. J. P. Buckley, Dayton, Ohio.
- 871,197. Vehicle wheel. N. Schack, St. Louis.
- 871,144. Tire. [Pneumatic.] W. A. Heller, Akron, Ohio.
- 871,493. Rim for vehicle wheels. E. D. Valentine, Akron, Ohio.
- 871,481. Vehicle wheel. R. E. Carwin, Grand Rapids, Mich.
- 871,506. Resilient tire. I. W. Hodgson, Minneapolis, Minn., assignor of one-half to E. J. Hodgson, Minneapolis, and one-fourth to P. W. Herzog, St. Paul, Minn.
- 871,515. Vehicle wheel. W. G. Mullen, assignor of one-half to J. A. Henjum, both of Pomona, Cal.
- 871,575. Tire protector. W. T. Dergatz, Peoria, Ill., assignor to W. J. Wickes and A. D. Eddy, Chicago, Mich.
- 871,579. Atomizer. W. J. English, Cohoes, N. Y.
- 871,700. Pneumatic knee pad. W. Long, assignor of one-half to J. C. Newby, both of Sheridan, Ind.

Trade Marks.

628. The B. F. Goodrich Co., Akron, Ohio. The letter *G* within a wreath. For a large variety of rubber goods.
- 27,209. Weed Chain Tire Grip Co., New York city. The representation of a pneumatic tread wheel chain grip. For a chain tire grip.
- 28,172. New York Belting and Packing Co., Ltd., New York city. The word *Karbonite*. For rubber belting.
- 29,536. Hood Rubber Co., Boston. The representation of a spinning top. For rubber footwear and rubber tires.
- 30,363. L. Candee & Co., New Haven, Conn. The word *Fairy*. For rubber footwear.

ISSUED NOVEMBER 26, 1907.

- 871,811. Pneumatic cushion. W. C. McCullough, Bucyrus, Ohio.
- 871,930. Patch for pneumatic tires. G. Hagstrom and E. Hagstrom, assignors to The Hagstrom Bros. Mfg. Co., all of Lindsay, Kans.
- 871,945. Tire. [Solid.] R. M. Merriman, Youngstown, Ohio.
- 871,973. Multipart mold for pneumatic tires. F. Veith, Veithwerk, Germany.
- 872,001. Hose coupling. J. G. Massie, Belleville, Ill.
- 872,096. Means for preventing side slip in pneumatic tires. L. E. Trefiere and V. J. Jehin, Paris, France.
- 872,184. Door check or bumper. H. F. Keil, Bronxville, N. Y.
- 872,185. Door check or bumper. *Same*.
- 872,207. Tire channel cleaning device. W. C. Wegner, Laporte, Ind.
- 872,217. Syringe. [Vaginal.] A. E. Bonesteel, Denver, Colo.
- 872,246. Fastening device for pneumatic tire protectors. R. H. Morris and E. E. Townsend, Oakland, Cal.
- 872,295. Tire setting machine for rubber tires. J. L. Hixson and C. W. Powell, Ypsilanti, Mich.
- 872,311. Vehicle wheel. E. Sutherland, Hollywood, Cal.

Trade Marks.

- 28,173. New York Belting and Packing Co., Ltd., New York city. The word *Draphen*. For rubber packing.
- 30,402. George Borgfeldt & Co., New York city. The word *Coronet*, under the representation of a crown. For pencils and erasers.

ISSUED DECEMBER 3, 1907.

- 872,334. Air ship. A. S. Fadda and J. Di Lorenzo, Pittsburgh, Pa.
- 872,362. Pneumatic spring and shock absorber for motor vehicles. A. L. Muren, Belleville, Ill.
- 872,423. Chain pump bucket. F. G. Hodell, Cleveland, Ohio.
- 872,463. Hose coupling. B. A. Schwabe, Abrams, Wis.
- 872,472. Fastening for resilient tires. O. G. Stolz, Chicago.
- 872,526. Protected pneumatic tire. C. G. Lotave, assignor of one-half to E. R. Cooper, both of Denver, Colo.
- 872,645. Resilient tired wheel for self propelled vehicles. E. M. Carhart, Providence, R. I.
- 872,836. Vehicle wheel. T. J. Mell, Youngstown, Ohio, assignor to The Republic Rubber Co.
- 872,860. Vehicle tire. W. C. Taylor, Paris, France, assignor of one-half to C. G. Taylor, Washington, D. C.

Trade Marks.

- 29,405. The Blastro Mfg. Co., Hartford, Conn. The word *Elastro*. For a tire fluid.
- 29,924. The Joseph Banigan Rubber Co., Providence, R. I. The word *Woonasquackett* in horseshoe shape. For rubber footwear.
- 29,926. *Same*. The representation of a lion. For rubber footwear.
- 29,927. Meyer Rubber Co., New Brunswick, N. J. The words *Meyer Rubber Company*. For rubber footwear.

- 29,929. American Rubber Co., Boston. The words *Papa Rubber Shoe Co.*, Boston, within an ornamental design. For rubber footwear.
- 29,930. Same. The words *American Rubber Co.*, on a shield. For rubber footwear.
- 29,938. Goodyear's India Rubber Glove Mfg. Co., Naugatuck, Conn. The words *Goodyear's I. Rubber* (on a representation of a glove) *G. New York*, all within a circle. For rubber footwear.
- 29,944. Boston Rubber Shoe Co., Boston. The words *Boston Rubber Shoe Co.* within a circle and the words *Boston, U. S. A.*, within an inner circle. For rubber footwear.
- 29,945. Same. The words *Bay State Rubber Company* within a circle, over the words *Boston, U. S. A.* For rubber footwear.
- 29,946. New Brunswick Rubber Co., New Brunswick, N. J. The words *New Brunswick Rubber Company*. For rubber footwear.
- 29,958. United States Rubber Co., New Brunswick, N. J. The words *New Jersey* within a scroll. For rubber footwear.
- 30,399. George Borgfeldt & Co., New York city. The word *Coronet* under the representation of a crown. For rubber balls and toys.
- 30,400. Same. The word *Coronet*. For rubber toilet articles.
- 30,401. Same. The word *Coronet* under the representation of a crown. For rubber surgical goods.
- 30,727. The Lycoming Rubber Co., Williamsport, Pa. The word *Lycoming*. For rubber footwear.
- 30,728. Same. The words *Keystone Rubber Co.* within the outline of a keystone, over the letters *U. S. A.* For rubber footwear.
- 30,729. Same. The words *Lycoming Rubber Co.*, Williamsport, Pa., within an oval, over the letters *U. S. A.*

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 30, 1907.]

- 15,311 (1906). Vulcanizing the macerated wood of rubber or other gum-yielding plants. F. Ephraim, Torreon, Mexico.
- *15,332 (1906). Spring wheel. W. H. Parham and F. E. Lack, Paducah, Ky.
- 15,401 (1906). Detachable antiskid. C. Joly, London.
- *15,403 (1906). Pinch die for lettering golf balls. J. C. Cory, New York.
- 15,442 (1906). Tire tread with imbedded steel plates. A. B. Verrier, Swindon, Wilts.
- 15,487 (1906). Means for generating acetylene gas for inflating tires. R. Parsons, Stranooden, and T. Parsons, Westport, Ireland.
- 15,499 (1906). Tire repair vulcanizer, electric heated. L. Binko and Phoenix Electric Heating Co., London.
- 15,511 (1906). Puncture shield for tires. M. E. M. Reischer, London.
- 15,628 (1906). Pneumatic shoe tree. E. Lovell, London.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 6, 1907.]
- 15,772 (1906). Pneumatic shock absorber. W. H. Humphreys, Liverpool.
- 15,789 (1906). Spring wheel. O. J. Bugnot and O. Humbert, Paris, France.
- 15,830 (1906). Pneumatic hub. F. Walton, London.
- 15,883 (1906). Pneumatic buoy or life-saving float. E. S. Copeman, Suffolk.
- 15,897 (1906). Spring wheel. G. S. Ogilvie, Suffolk.
- 15,972 (1906). Non skid band for tires. J. A. Goffin, Suresnes, France.
- 15,991 (1906). Antiskid device, being spade like projections mounted on the wheel rim. W. Lowry, Belfast, Ireland.
- 16,024 (1906). Pneumatic vehicle suspension. C. F. Readman and J. Lingard, Hanley, and T. Unwin, Stoke-on-Trent.
- 16,030 (1906). Mold for tires. W. H. Cox, Eecks.
- 16,050 (1906). Rubber cored golf ball. C. Porter, London.
- 16,084 (1906). Crude sheet rubber, compounded for slow or rapid curing, for tire repair. W. R. Ormandy, Warrington.
- 16,110 (1906). Spring wheel. R. C. Parsons, London.
- 16,130 (1906). Link belt antiskid. A. H. Duncuff, Birmingham.
- *16,210 (1906). Multiple or diaphragm tube for tires. F. A. Magowan, New York city.
- 16,241 (1906). Solid rubber tire, with fastening plate imbedded in base. W. Struck, Berlin, Germany.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 13, 1907.]
- 16,337 (1906). Removable rim, wedge fastening. T. Soper, Devizes.
- 16,368 (1906). Corn oil rubber substitute. F. Fenton, Mitcham.
- 16,519 (1906). Rubber sub., made of casein, gelatine, etc. A. Litzler, Mulhausen, Alsace.
- 16,593 (1906). Spring tire, the sections mounted upon elastic levers, tangential to rim. R. Varty, Bedford, and F. L. Vart, Royston.
- 16,620 (1906). Tire shoe, made wholly of flat links and hooks. G. Magaldi, Buccino, Italy.
- 16,730 (1906). Rubber coat, with divided skirts. A. A. Holdsworth, Hawksburn, Victoria.
- 16,787 (1906). Pneumatic shoe tree. G. F. Johnson, Northampton.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 20, 1907.]
- 16,832 (1906). Spring wheel. J. Pounds, Melbourne, and H. H. Pounds, St. Kilda, Victoria.
- 16,868 (1906). Spring block tire. E. Rodriguez, London.

- 16,966 (1906). Detachable heel fastening. W. Barber, London, and S. Fletcher, Sutton.
- 17,101 (1906). Pneumatic hub. K. L. Holt, Southport.
- 17,107 (1906). Goggles made wholly of rubber and glass. J. Byron, Liverpool.
- 17,251 (1906). Lubricating packing, made of rubber, fabric and graphite. J. Walker, London.
- 17,277 (1906). Solid tire bearing on pneumatic in deep channel. R. Bancroft, Manchester.
- 17,350 (1906). Waterproof coat, with detachable sleeves. H. Broughton, Rochdale.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, NOVEMBER 27, 1907.]
- 17,438 (1906). Solid rubber tire, being sheet rubber wrapped around a core. A. W. Carpenter, London.
- 17,465 (1906). A diaphragm tube, one being inflated automatically, when the other is deflated. E. H. Gymnich and H. Menz, Breslau, Germany.
- 17,501 (1906). Flat link antiskid. J. Eastwood, Leeds.
- 17,529 (1906). Cushion tire. F. Oldfield and J. A. Schofield, Halifax.
- 17,648 (1906). Sectional cushion tire. G. B. M. Spigno, Genoa, Italy.
- 17,700 (1906). Detachable antiskid tread. E. Siegenthaler, New Malden.
- 17,773 (1906). Rubber substitute, made from turpentine. A. E. A. L. Rouxville, Paris, France.

THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 376,507 (Apr. 6, 1907). A. Manson. Fastening pneumatic tires.
- 376,508 (Apr. 6). R. Neufeld. Elastic tire.
- 376,558 (Apr. 8). L. Babert. Antiskid tire.
- 376,539 (Apr. 8). A. Rickli. Removable rim.
- 376,490 (Apr. 6). Romet et von Lorn. Rubber machinery.
- 376,593 (Apr. 11). A. Peaujon. Tire tread.
- 376,707 (Apr. 6). V. Purrey. Tire and rim.
- 376,739 (Apr. 13). Société Panhard et Levassor. Removable rim.
- 376,805 (Apr. 16). H. W. Dover. Pneumatic tire.
- 376,820 (Apr. 17). H. Claudy. Elastic tire.
- 376,858 (June 23, 1906). R. Desouches. Cushion tire.
- 376,908 (Apr. 19, 1907). C. Fourmon. Elastic tire.
- 376,913 (Apr. 19). Société Continental et Gutta Percha. Removable rim.
- 377,055 (Apr. 22). N. Cugler. Wire mesh pneumatic tire.
- 377,202 (Apr. 26). Marchant. Elastic tire.
- 377,272 (Apr. 29). J. P. LeGrand. Pneumatic tire.
- 377,306 (May 1). M. Dondin. Pneumatic wheel.
- 377,352 (May 2). S. Teuzet. Spring wheel.
- 377,356 (May 2). Société Michelin et Cie. Pneumatic tire.
- 377,370 (May 3). W. Weidling. Automobile tire.
- 377,428 (March 30). E. B. Killen. Rubber tire.
- 377,611 (May 8). E. L. Carbone. Elastic tire.
- 377,462 (Apr. 29). P. Hampel. Rubber bust form for women.
- 377,526 (May 6). D. Landmann. Process for extracting rubber, gutta, and balata.
- 377,642 (March 18). Société Marvel Rubber Co. Rubber footwear.
- 377,644 (March 29). J. Cairns. Pneumatic heel.
- 377,707 (May 11). Vereinigte Berlin-Frankfurter Gummiwaren-Fabriken. Antiskid.
- 377,748 (May 13). H. J. Bastide. Cellular pneumatic tire.
- 377,807 (May 14). J. A. Swinchart. Twin tire.
- 377,857 (May 16). A. Hubaut. Punctureproof tire.
- 377,899 (March 4). A. Cuinet & A. Cuinet. Antiskid.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

RUBBING IN RUBBER CEMENT.

THE result of the observations of a writer in *Shoe and Leather Reporter* has been that wherever rubber cement is used, the greatest difficulty usually lies in not satisfactorily working the cement into the leather. He says that this should invariably be well done to secure the best results from any cement. If one examines a piece of bottom stock which has been fitted under the microscope, there will be seen a great forest of fuzzy fibers sticking up from the solid bed of the channel which have been ripened up by the channel knife. Cement applied to the tops of these fibers, and not rubbed into the roots of them, cannot hold very firmly. While a much poorer grade of cement will work in will ordinarily satisfactorily take the place of a much better grade which is merely applied to the upper surface. Because of this, rotary brush cementing machines usually do much more satisfactory work than any hand cementer can do, and when such a machine is used, great care should be taken that the work is held up firmly to the brush.

RUBBER PLANTING COMPANIES.

THE London Asiatic Rubber and Produce Co., registered in London, October 26, with a capital stated of £140,000 [= \$681,310], has for its purpose the acquisition, as a going concern, of the Asiatic Rubber Produce Co., Limited, formed in Ceylon in 1905, with an issue of capital to date of £76,000 13s. 4d. The estates acquired are in Malacca and Selangor, and embrace 4190 acres planted to rubber. The number of rubber trees is reported at about 650,000, of which 14,600 will be tappable this year, and an increasingly large number each year thereafter. The members of the board are also directors in other important rubber planting enterprises.

At the meeting to complete the organization of the Sumatra-Deli Rubber Estates, Limited (London, November 12), it was stated that the transfer of the property was complete and that two shipments of rubber, amounting to about 4000 pounds, had been received in London.

The Sambas Rubber and Gutta Percha Co., Limited, whose estates are in Borneo, are reported to have ordered 300,000 Pará rubber seeds and 15,000 18 month old plants.

The average price obtained in London for Kepitigalla estates rubber during the business year ended March 31 last was 5s. 5¾d. [= \$1.33½] per pound. The directors think that the greater yield per tree this year will offset the reduction that has occurred in the price of rubber.

The first report of Kuala Lumpur Rubber Co., Limited, covers fifteen months, up to June 30, 1907. The rubber product sold—mainly within the last twelve months of this period—amounted to 31,902 pounds, from 14,501 trees, and realized 5s. 2 2-5d. [= \$1.30 2-3] per pound, after deducting sale charges. The profit for fifteen months was £7612, of which £7503 was earned in the last twelve. No dividend was expected, but the directors voted to disburse 3 per cent.

SAO PAULO (BRAZIL).

THE department of agriculture of the Brazilian state of Sao Paulo during the first six months of 1907 distributed among planters 124,000 seeds of the Bahia rubber tree known as "Manicoba de Jequié." This important rubber species has been referred to in THE INDIA RUBBER WORLD October 1, 1907 (page 9), and November 1, 1907 (page 55). It has been described as *Manihot caricifolia*, the "manicoba" of Ceará being known botanically as *Manihot Glaziovii*.

PROGRESS IN GUATEMALA.

MR. LEO F. NADEAU, the Guatemalan consul at Providence, Rhode Island, has been furnished with details of the formal celebration of the Northern Railroad of Guatemala, to take place in this month. The new railway from Puerto Barrios to Guatemala city, the national capital, a distance of about 200 miles, will be of great commercial importance to the republic, opening as it does for the first time a very large region to the Atlantic seaboard. The project has been almost wholly financed with American capital, backed by a government concession and guarantee. President Cabrera, in connection with the opening, has designated two weeks as a national holiday. Mr. Nadeau, who is interested largely in rubber planting and grazing in Guatemala, is extremely sanguine as to the future of the republic.

"RUBBER SHARE HANDBOOK."

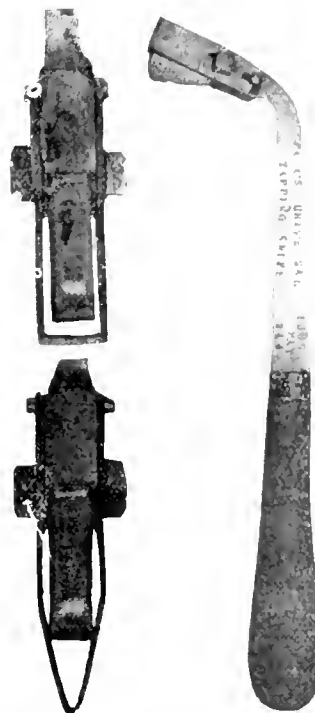
THIS is a compilation of details of companies owning rubber properties in the Far East, South America, and Africa, issued by *The Financier and Bullionist*, an important London financial daily. It does not purport to be a complete list, but to deal with a sufficient number of companies to enable the average investor to form a just and accurate opinion of rubber shares as a basis for investment. The information appears accurate in every way, and is brought down to a later date than in any

other reference book. There are several chapters of informing comment by way of introduction. The price is 1 shilling.

Gow, Wilson & Stanton, Limited, of London, under an arrangement with *The Financier*, have brought out a special edition of the "Rubber Share Handbook," with additional introductory matter prepared by themselves.

TWO NEW TAPPING TOOLS.

THE "Universal" rubber tapping knife patented by George W. Pask, of the Kepitigalla rubber estate, in Ceylon, has resulted from the efforts of the inventor to devise one tool that



PASK'S "UNIVERSAL" RUBBER TAPPING KNIFE.

(The small cuts are two-thirds the full size of the cutter blades.)

will do all the work in tapping. It is referred to as cutting all styles of tapping—herring bone, half herring bone, spiral, or "V." It will make the first channels vertically and afterward take off a fixed width or depth of bark as required, cutting either upward or downward, or to the left or right, and without clogging. It is designed especially to prevent cutting too wide or deep, or injuring the cambium. The larger of the illustrations shows the knife complete, with the handle. One of the smaller pictures gives a view of the cutter blade, which is square shaped. "V" shaped cutters are supplied, when preferred, as shown in the other small picture.

* * *

THE "Alpha" rubber tapping knife, shown in the next illustration, has been tested more thoroughly on planted *Castilloa* trees, though designed for use also on *Hevea* rubber. The double handle is referred to as allowing the operator to keep the knife steady, thus making a straight cut. The curved blade cuts the groove and the straight, following blade skins off the



THE "ALPHA" TAPPING KNIFE.

bottom side, exposing to the fullest the cells and allowing the greatest amount of latex to flow into the channel. The blades may be renewed when worn out. This tool has been introduced by Mr. Leslie Radclyffe, 35, Queen Victoria street, E. C., London.

Official India-Rubber Statistics.

For the United States Fiscal Year Ended June 30, 1907.

INDIA-RUBBER.

I.—Imports of Crude India-Rubber, by Countries.

FROM	Pounds.	Value.
<i>Europe</i>		
Belgium	4,056,551	\$3,710,539
France	2,058,837	1,788,768
Germany	4,730,257	3,494,854
Netherlands	206,787	167,202
Portugal	3,050,151	2,231,524
United Kingdom	6,896,051	8,440,716
Total	24,007,634	\$19,833,660
<i>North America</i>		
British Honduras	24,001	\$10,506
Canada	2,816	1,873
Costa Rica	130,650	80,860
Guatemala	35,152	26,231
Honduras	194,334	76,444
Nicaragua	661,327	441,151
Panama	212,003	146,068
Salvador	25,882	14,314
Mexico	7,175,007	2,877,922
British West Indies	6,038	6,429
Total	8,381,200	\$3,684,894
<i>South America</i>		
Brazil	40,286,751	\$32,943,792
Colombia	738,208	393,810
Ecuador	941,274	652,242
British Guiana	1,216	595
Dutch Guiana	550	250
Peru	165,346	147,816
Venezuela	190,368	154,064
Total	42,323,713	\$34,292,509
<i>Asia</i>		
British India	51,651	\$44,248
Straits Settlements	1,926,346	767,763
Other British East Indies	236,658	271,795
Dutch East Indies	19,990	17,432
Total	2,234,654	\$1,101,238
<i>Africa</i>		
Madagascar	16,637	\$7,620
Total	16,637	\$7,620
GRAND TOTAL	76,963,838	\$58,919,981
Total, 1905-06	57,844,345	\$45,114,450
Total, 1904-05	67,234,256	49,878,366
Total, 1903-04	50,015,551	40,444,250
Total, 1902-03	55,010,571	39,436,710

II.—Imports of Crude India-Rubber, by Customs Districts.

AT—	Pounds.	Value.
Baltimore, Md.	243,165	\$166,310
Boston and Charlestown ..	1,120,732	776,369
New York, N. Y.	72,030,464	56,454,631
Philadelphia, Pa.	271,777	188,133
Galveston, Tex.	1,215	625
Mobile, Ala.	35,197	25,692
New Orleans, La.	401,231	260,162
Corpus Christi, Tex.	2,122	1,193
Paso del Norte, Tex.	3,379	1,404
Saluria, Tex.	2,812,325	1,010,655
San Francisco, Cal.	24,776	18,640
Chicago, Ill.	5,619	4,436
Vermont, Vt.	2,816	1,873
Pittsburg, Mo.	9,020	9,818
Total	76,963,838	\$58,919,981

III.—Imports of Manufactures of India-Rubber, by Customs Districts.

AT—	Value.
Baltimore, Md.	\$44,672
Boston and Charlestown ..	100,931
Fall River, Mass.	7,670
Newport News, Va.	1,220
New York, N. Y.	1,065,031
Philadelphia, Pa.	23,743
Porto Rico	2,681
New Orleans, La.	3,931
Tampa, Fla.	1,456
Hawaii	1,540
San Francisco, Cal.	13,868
Buffalo Creek, N. Y.	44,300
Chicago, Ill.	28,161
Cuyahoga, Ohio	1,091
Detroit, Mich.	2,847
Genesee, N. Y.	1,101
Milwaukee, Wis.	2,102

St. Louis, Mo.	3,702
Cincinnati, Ohio	1,496
Kansas City, Mo.	1,290
Other ports	8,802
Total	\$2,262,783

IV.—Imports of Manufactures of India-Rubber, by Countries.

[+ Indicates Increase; — indicates Decrease, compared with preceding year.]

FROM—	Value.
Austria-Hungary	\$62,878+
Belgium	69,287+
Denmark	3—
France	825,390+
Germany	1,028,746+
Greece	187—
Italy	26,620+
Netherlands	1,590—
Norway	77+
Russia in Europe	21,301—
Spain	509+
Sweden	1+
Switzerland	1,687—
United Kingdom	193,408+
Bermuda	3+
Canada	27,070—
Mexico	136+
Cuba	555+
Colombia	10—
China	75+
Hongkong	346—
Japan	1,052+
Australia	157+
Total, 1906-07	\$2,262,783+
Total, 1905-06	\$1,992,413
Total, 1904-05	1,389,064
Total, 1903-04	821,526

V.—Exports of Manufactures of India-Rubber (and Gutta-Percha), by Customs Districts.

FROM—	Beltg, Packing, and Hose.	Boots and Shoes.	All other Rubber.
Bangor, Me.	\$3,002	\$346	\$1,291
Boston, Charlestown ..	15,774	417,041	536,328
New York	772,784	722,400	1,927,239
Pas'm'quaddy, Me.	3,105	114	4,318
Philadelphia	20,731	32	23,399
New Orleans	12,282	620	1,690
Arizona	69,547	1,108	4,156
Brazos de Santiago .....	.....	122,192	.....
Corpus Christi	38,534	1,064	42,995
Paso del Norte	57,795	92	11,416
Saluria	5,893	23,482	284
Oregon	22,040	15,520	33,662
Puget Sound	1,109	120	177
San Diego	113,662	20,594	205,224
Buffalo Creek .....	.....	.....	227,470
Champlain	6,183	40	116,002
Detroit	22,340	1,113	29,273
Duluth	283	.....	1,267
Minnesota	363	452	22,538
Huron	2,081	.....	23,783
Memphremagog	19,347	9,331	92,270
Niagara	29,473	550	125,147
N. and S. Dakota	14,687	41	32,621
Oswegatchie	5,034	65	64,313
Superior	2,405	.....	.....
Vermont	7,261	16,618	77,084
Other ports	2,106	351	1,866
Total	\$1,253,369	\$1,231,898	\$3,729,643

GUTTA-PERCHA.

Imports of Crude Gutta-Percha, by Countries.

FROM—	Pounds.	Value.
Germany	160,050	\$69,315
Netherlands	724	30
United Kingdom	58,576	38,465
British Honduras	2,632	2,003
Canada	4,510	3,408
Panama	2,266	748
Mexico	234	56
Colombia	12,832	3,445
Ecuador	71,604	51,716
Straits Settlements	224,363	32,153
Total, 1906-07	546,890	\$201,339
Total, 1905-06	500,770	\$188,161
Total, 1904-05	665,217	210,188
Total, 1903-04	424,617	174,953

GUTTA-JELUTONG (PONTIANAK).

United Kingdom	395	\$15
France	539	58
Netherlands	112,274	5,908
Germany	9,464	473
Straits Settlements	27,508,031	1,054,533
Dutch East Indies	710,057	24,111
Total, 1906-07	28,437,660	\$1,085,068
Total, 1905-06	21,390,116	\$733,974
Total, 1904-05	19,104,911	641,319
Total, 1903-04	14,887,416	439,231
Total, 1902-03	13,984,817	345,431

[NOTE.—The imports of Gutta-percha credited to South America are undoubtedly Balata.]

RECLAIMED RUBBER.

Quantity and Value of Imports, by Countries.

To—	Pounds.	Value.
France	244,190	\$323,353
Germany	120,510	21,279
Italy	128,608	14,512
Netherlands	88,063	17,610
Norway	12,313	1,557
United Kingdom	1,585,471	228,382
Canada	2,360,868	347,401
Japan	10,753	2,015
Total, 1906-07	4,550,788	\$665,109
Total, 1905-06	4,084,696	\$511,843
Total, 1904-05	a	522,002
Total, 1903-04	a	178,335
Total, 1902-03	a	93,265

SCRAP RUBBER.

Quantity and Value of Exports, by Countries.

To—	Pounds.	Value.
Belgium	39,396	\$4,316
Denmark	2,673	75
France	329,827	34,890
Germany	306,368	37,270
Italy	56,889	5,693
Netherlands	144,898	12,055
Sweden	80,214	8,261
United Kingdom	2,573,324	337,454
Canada	1,132,032	108,531
Australia	1,000	150
Total, 1906-07	4,756,621	\$548,695
Total, 1905-06	a	\$339,597
Total, 1904-05	a	204,905
Total, 1903-04	a	534,500
Total, 1902-03	a	404,586

a—Not officially reported.

Quantity and Value of Imports, by Countries.

From—	Pounds.	Value.
Austria-Hungary	102,818	\$3,020
Belgium	266,175	21,431
Denmark	355,762	30,487
France	1,075,836	103,334
Germany	7,402,928	624,361
Greece	2,541	178
Italy	3,900	27
Netherlands	310,594	26,488
Norway	490,012	44,305
Roumania	15,576	1,134
Russia in Europe	7,766,304	678,462
Sweden	667,544	54,589
Switzerland	42,503	4,628
Turkey in Europe	610,757	51,938
United Kingdom	5,250,490	541,061
Bermuda	15,031	766
Canada	3,873,218	339,123
Newfoundland, Labrador ..	39,237	3,192
Mexico	20,631	1,832
Miquelon, Langley	506	20
British West Indies	79,889	3,555
Cuba	136,931	10,719
China	14,507	537
Straits Settlements	162,600	10,032
Turkey in Asia	11,620	1,042
Australia	20,883	826
Total, 1906-07	29,335,193	\$2,608,987
Total, 1905-06	24,756,486	\$1,721,678
Total, 1904-05	15,575,214	953,439
Total, 1903-04	20,270,970	1,164,785
Total, 1902-03	24,659,394	1,516,137

EXPORTS OF AMERICAN RUBBER GOODS, FISCAL

YEAR ENDED JUNE 30, 1907.

EXPORTED TO—	Belting, Packing, and Hose.	Boots and Shoes. Pairs.	Other Goods. Value.	Total Value.
EUROPE:				
Austria-Hungary	\$ 1,975	45,957	\$ 23,499	\$ 13,093
Azores, Madeira Islands.	.....	449	604	412
Belgium	7,179	164,861	72,388	49,799
Denmark	6,191	26,820	14,143	9,391
France	18,668	116,957	53,976	49,993
Germany	39,661	262,661	123,498	315,499
Gibraltar .....	.....	288	393	.....
Italy	598	100,930	49,293	95,939
Netherlands	4,662	866	119	96,715
Norway	1,116	29,682	13,960	2,166
Portugal .....	.....	294	229	554
Roumania .....	.....	1,329	926	.....
Russia in Europe	618	1,554	782	19,853
Spain	961	6,984	3,689	1,943
Sweden	1,677	134,917	69,957	99,939
Switzerland	1,894	55,294	25,382	7,754
Turkey in Europe	2,500	227,568	111,632	177
United Kingdom	197,731	627,888	329,295	1,216,499
Total, Europe	\$195,062	1,897,346	\$883,736	\$1,877,386
NORTH AMERICA:				
Bermuda	\$ 327	273	\$ 130	\$ 1,076
British Honduras	829	4	14	101
Canada	15,216	79,279	75,279	818,364
Newfoundland, Labrador	7,274	26,616	18,610	2,762
Costa Rica	9,633	151	74	3,822
Guatemala	4,737	216	129	1,999
Honduras	2,999	86	147	222
Nicaragua	4,748	48	106	1,551
Panama	67,172	1,339	19,337	16,760
Salvador	3,745	4	29	2,530
Mexico	292,784	5,628	3,809	269,268
Miquelon, Langley .....	.....	362	566	20
West Indies—British	5,975	429	254	11,974
Cuba	84,694	7,862	7,321	191,999
Danish	616	88	69	375
Dutch	274	66	33	599
Haiti	1,251	228	196	807
Santo Dom.	4,599	366	264	3,356
Total, North America	\$644,473	122,439	\$108,697	\$1,317,715
SOUTH AMERICA:				
Argentina	\$ 39,423	26,723	\$ 14,632	\$ 17,387
Bolivia	167	.....	.....	109
Brazil	15,221	22,666	12,983	27,868
Chile	17,800	6,852	7,319	25,064
Colombia	5,097	715	424	8,385
Ecuador	5,172	1,858	800	2,915
Guiana—Dutch	1,322	2,101	1,029	2,391
French	29	46	23	697
Peru	10,573	1,086	2,648	7,688
Uruguay	183	10,060	6,011	8,822
Venezuela	3,469	24	12	6,799
Total, South America	\$98,375	74,231	\$46,481	\$109,976
ASIA:				
Chinese Empire	\$ 14,297	3,859	\$ 4,414	\$ 18,951
East Indies—British	19,798	1,281	613	10,866
Straits S.	1,662	220	112	692
Dutch	431	.....	.....	845
Hongkong	2,700	18,597	7,562	3,665
Japan	29,736	72,445	44,266	194,514
Korea	2,514	166	302	466
Russia, Asiatic .....	.....	3	15	1,310
Siam	410	.....	.....	27
Turkey in Asia	28	16,431	8,746	314
Total, Asia	\$62,516	112,912	\$66,030	\$230,872
OCEANIA:				
Australia and Tas- mania	\$113,022	140,053	\$ 75,714	\$105,673
New Zealand	11,665	31,276	23,281	35,581
French Oceania	691	881	695	213
German Oceania .....	.....	.....	.....	64
Philippine Islands	16,177	12,746	18,913	32,889
Total, Oceania	\$142,455	184,956	\$118,603	\$174,420
AFRICA:				
British Africa—West	\$ 3,697	36	\$ 40	\$ 104
South	59,921	8,599	8,941	11,454
Canary Islands .....	.....	.....	.....	125
Liberia .....	.....	.....	.....	30
Portuguese Africa	45,161	.....	.....	9,263
Turkey in Africa— Egypt	1,709	.....	.....	1,163
Total, Africa	\$110,488	8,545	\$ 8,981	\$22,274
GRAND TOTAL	\$1,253,369	2,310,420	\$1,231,898	\$3,720,643
Grand Total, 1905-06	\$1,221,159	2,693,690	\$1,505,082	\$5,662,144
Grand Total, 1904-05	994,100	2,390,539	1,214,342	2,572,375
Grand Total, 1903-04	880,010	2,310,808	1,086,364	2,469,750
Grand Total, 1902-03	810,985	2,307,401	1,056,491	2,299,875
Grand Total, 1901-02	634,146	2,594,798	1,046,315	1,781,041
Grand Total, 1900-01	565,726	1,450,100	724,015	1,727,527
Grand Total, 1899-00	541,830	767,104	420,746	1,405,212

RUBBER TRADE IN CANADA.

CANADIAN imports of india-rubber manufactures for the fiscal year ended June 30, 1907, are officially stated to have been in value as follows:

	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Boots and shoes	\$63,702	\$82	\$125	\$63,909	\$22,403
Belting	45,035	3,495	.....	28,509	7,218
Clothing and water- proof cloth	11,291	18,972	.....	29,273	8,298
Hose	28,579	3,849	81	32,491	10,771
Packing and mats	59,897	833	178	66,878	21,142
All other	262,564	66,707	30,689	353,960	88,413

Total	\$450,939	\$80,999	\$31,073	\$569,011	\$158,245
Total, 1905-06	680,614	99,995	32,034	811,743	100,879
Total, 1904-05	934,422	164,996	26,071	825,399	213,607
Total, 1903-04	917,471	334,946	26,098	978,215	256,210
Total, 1902-03	573,421	446,811	25,579	1,045,811	253,873

The only country showing a gain in the above trade is Germany, whose share advanced from \$21,716 to \$22,646.

There may also be noted the following imports, not classified by the customs as "rubber goods," but having a relation to the industry:

	United States.	Great Britain.	Other Countries.	Total Value.	Duties Collected.
Webbing, elastic and non elastic	\$118,547	\$55,249	\$5,476	\$179,272	\$32,185
Stockinettes for rubber footwear	49,357	2,625	.....	51,982	7,666
Duck for rubber belting and hose	54,276	4,090	.....	58,366	free
Rubber thread	899	.....	.....	899	free

EXPORTS OF CANADIAN RUBBER GOODS.	To—	Value.	To—	Value.
Great Britain	\$29,525	China	\$1,308	
Australia	34,558	Japan	58	
Newfoundland	13,787	United States	17,591	
New Zealand	48,210	Total	\$148,027	
Other British	998	Total, 1906	266,504	
Europe	1,752	Total, 1905	170,359	
South America	240			

IMPORTS OF RAW MATERIALS.	Pounds.	Value.
Gutta-percha	11	\$17
India-rubber	4,002,075	1,898,633
*Rubber recovered; rubber substitute; hard rubber in sheets	2,551,476	460,767
Rubber powdered and rubber waste	917,555	86,955

Total, 1906-07	5,471,117	\$2,446,372
Total, 1905-06	5,961,041	2,755,350
Total, 1904-05	5,474,911	2,723,273

RUBBER IN THE AUSTRALIAN TARIFF.

THE new tariff introduced by the federal treasurer of the commonwealth of Australia on August 8, 1907, going into effect on that date, is yet to be considered by the commonwealth parliament, and may undergo some changes, though probably none of importance. The details in the tariff schedule relating to manufactures of india-rubber are compiled below. The first column gives the old rate of duty; the second column the new rate for general imports; and the third column the preferential, lower, rate on British made goods—all the duties being *ad valorem*.

	Old rate.	New. General.	British. Special.
Rubber boots and shoes	25%	25%	20%
Rubber sand shoes	20%	25%	20%
Wading boots	free	5%	free
Rubber hose	15%	25%	20%
Invalid beds	free	25%	20%
Other rubber goods	15%	25%	20%
Rubber syringes and like goods	free	free	free
Thread and hard rubber sheets	free	free	free
Reclaimed rubber	15%	25%	20%
Printers' blankets	15%	free	free

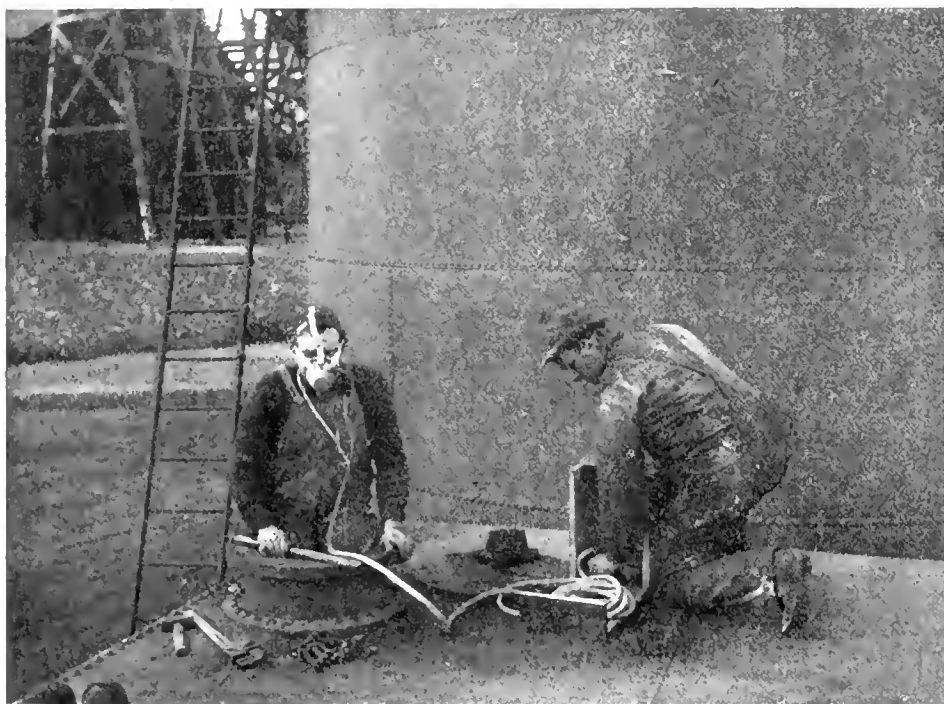
The main object of the new tariff appears not so much to give preference to British goods as to protect local industries. It is true that a preference is given to the mother country, but at the same time there has been a general increase of duties.

THE BARNUM RESPIRATOR.

AN illustration on this page relates to a device commended to the use of gas makers who are seeking to avoid the possibility of danger to their men while working about trenches and stations. This is the Barnum Respirator. In its use fresh air is supplied to the cap by pump and hose, and the pressure inside, being greater than that from the outside, keeps out the gas. The surplus air from the pump and the productions from the lungs

a feature of trade that has not had the attention that its importance would warrant. This may be due in part to the fact that there is less opportunity for the artistic to be in evidence, and displays are so signally directed to that end that the shoeman naturally endeavors to get in line with the procession rather than be conspicuous for a more commonplace trend of thought. However, some practical soul has pondered on the benefits to be derived from a commodious portable rack for rubbers alone, and we give the pictured result. The rack is made of iron, and

in its construction care has been given to make it strong and rigid. It will hold conveniently 84 pairs of boots or 252 pairs of overshoes. To the initiated 252 pairs means just 21 cases. This allows for all sizes and kinds, while it makes an attractive display, it also serves the purpose of lessening labor and saving space. There are six circular shelves in this rack, each divided into compartments, which offer numerous ways for the disposition of the stock, according as the shoeman may desire. The floor diameter is 41 inches and the height 74 inches, which makes all the compartments easily accessible. One of the best features of the construction is that it may be disjoined, so to speak, and packed away if for some reason it should temporarily be put out of commission. The removal of a few small wire clamps reduces the space it normally occupies so that it can be packed away in a small compass. The racks here illustrated are supplied to the trade by Batavia Specialty Co., Batavia, New York.

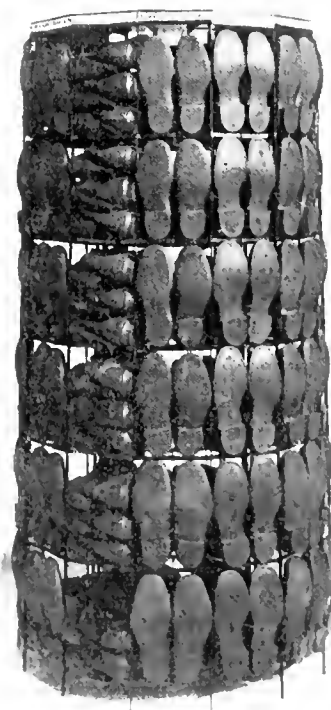
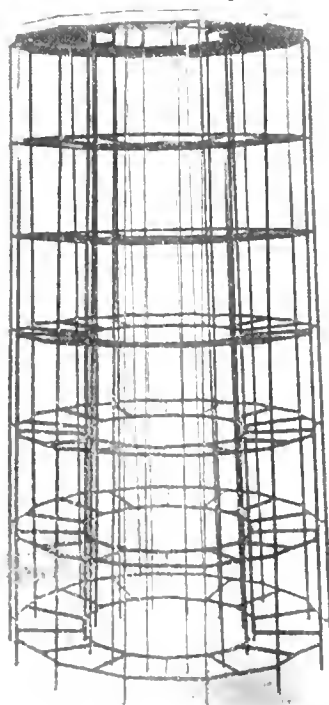


BARNUM RESPIRATOR—OIL TANK REPAIRING AND METER REPAIRING.

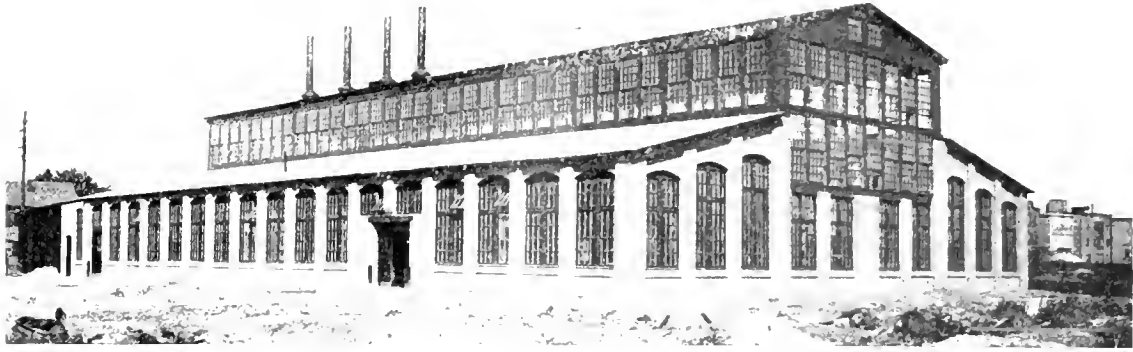
are forced out around the edge of the cap, which is held just tight enough by elastic bands to allow escapement. The complete outfit embraces a bellows and reservoir, mounted in a strong box in which is packed the entire appliance, weighing approximately 25 pounds. A 25 foot length of tubing is fastened to the reservoir and also to the adjustable hard rubber goose neck which connects the tubing with the face cap. The goose neck is adjustable both to the tubing and the face cap, and is turned at will so that the tubing can be over the shoulder or wherever the operator wishes. This outfit is in use by a large number of gas lighting companies throughout the United States, its sale being controlled by P. L. Rider, a long established rubber goods jobber at Worcester, Massachusetts.

RUBBER FOOTWEAR RACK.

WHILE there are devices galore for the display of other boots and shoes, rubber footwear seems



NEW PORTABLE RACK FOR RUBBER FOOTWEAR.



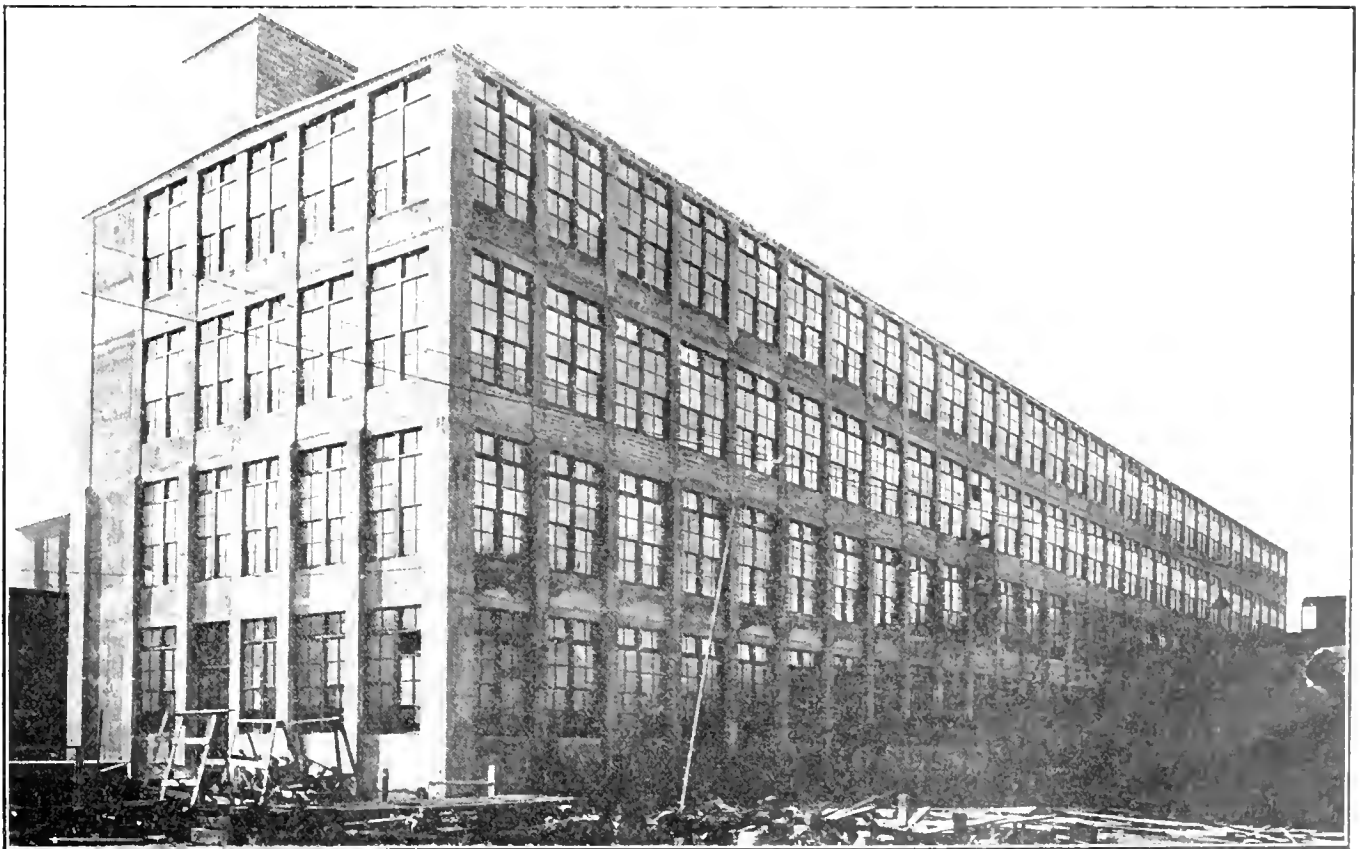
NEW BRASS FOUNDRY OF THE BOSTON WOVEN HOSE AND RUBBER CO.

Growth of the "Woven Hose" Plant.

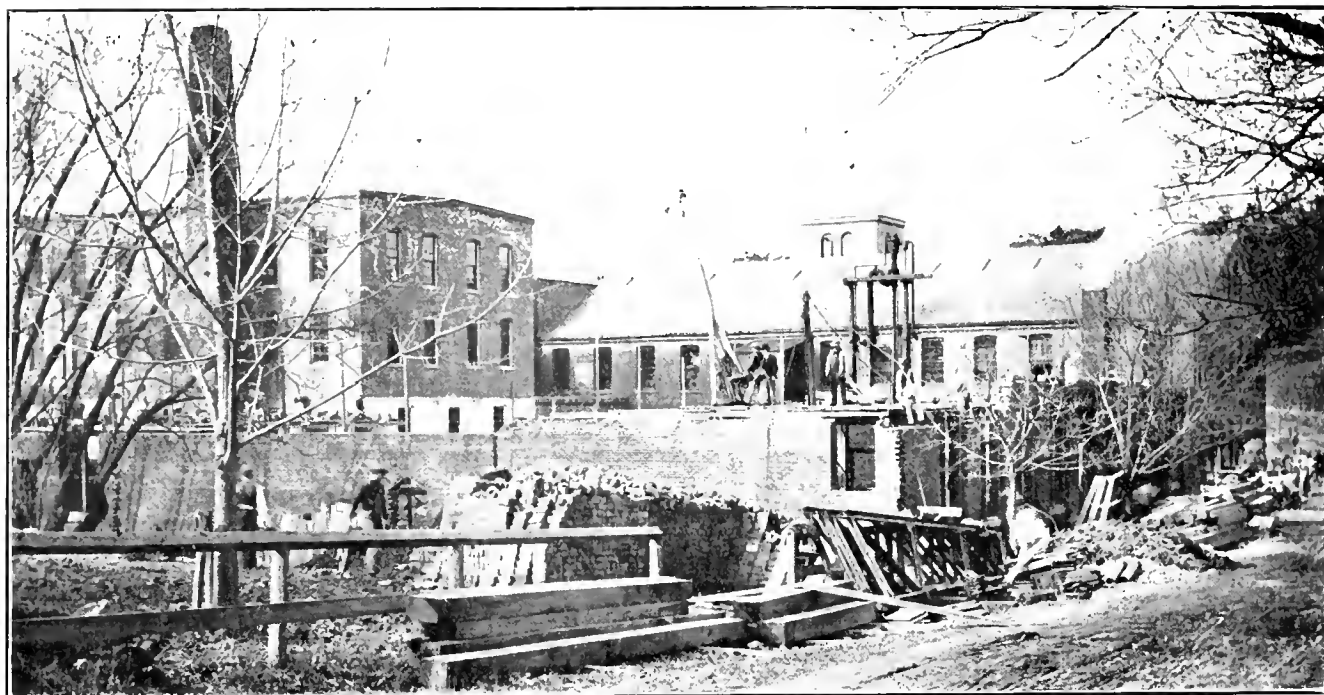
IN 1893 the Boston Woven Hose and Rubber Co. increased their goodly plant at Cambridgeport, Massachusetts, by erecting a huge three-story building that promised to care for all future needs for housing their growing business. To-day this addition, together with several lesser ones, and the primary plant as well, are so crowded with men, machinery, and goods-in process that more room has become absolutely necessary, and for some months builders have been at work erecting great factory structures on land adjoining the original plant.

Perhaps the most interesting of these new additions is the brass foundry. Not that it is the largest of them, although it is the largest brass foundry in the United States. It is built of brick, is 75 x 108 feet in dimension, and is one story, with

a lofty monitor top. It is here that such goods as the "Boston Nozzle" are made, together with a widely varying line of brass accessories to the hose trade, both for the home company and for manufacturers and dealers everywhere. Next in interest and of even more consequence is a fine four-story building of reinforced concrete, 60 x 325 feet, for the manufacture of hose, mats, and smaller press work. This building is as perfect in detail as could be designed, with concrete floors, wide prism glass windows, elevators, electric lights, and so on. On the ground floor are set the presses and machinery for the small work; on the next floor are the machinery and the vulcanizers for hose of the common or garden variety; on the third floor are tables and appliances for the manufacture of special large



BOSTON WOVEN HOSE AND RUBBER CO.'S NEW HOSE AND PRESS ROOM.



RECLAIMING PLANT AT PLYMOUTH OF THE BOSTON WOVEN HOSE AND RUBBER CO.

hose as suction, dredging sleeves, and the like; while on the top floor is stock and finished goods.

The largest building, really two buildings joined at the end, is for storage and shipping. This is four stories in height, of reinforced concrete, light, fireproof, and 550 feet in length by 50 feet average width. Here also will be located, when completed, the factory offices, laboratory, and experimental department of the company, now in the old plant, which space when vacated will be used in manufacturing and will be quite an addition and a needed one.

While the Cambridgeport plant is thus growing, the company's reclaiming factory at Plymouth has also been rebuilt lately and added to, so that it is now of a capacity and completeness that will fill all possible needs. All of this work begun during the past summer is now practically completed and the buildings now for the most part occupied. Not that other improvements are not projected, however, such as a tidewater canal, additional railroad sidings, new machinery, and other buildings, but of this "more anon."

The illustrations herewith relate to the new brass foundry of the company, put in operation October 14, 1907; the new hose and press building, just now completed, and the reclaiming plant of the company, at Plymouth.

CRUDE RUBBER INTERESTS.

HIGH RATES ON THE CONGO RAILWAY.

THE rate on crude rubber charged over the Congo railway—for a distance of only 260 miles around the cataracts in the Congo river, and only a small fraction of the distance between the producing regions and the consuming markets—will help to make plain why the raw material remains so high in price, compared with the reputed small first cost to the trading companies. The starting point by rail, as cargoes proceed toward the Atlantic, is Leopoldville, and the lower railway terminal at Matadi. The rate per ton of rubber, expressed in equivalent terms of American gold, from Leopoldville, and the intermediate stations, to Matadi, is as follows:

From Leopoldville.....	\$82.00	From Thysville.....	\$47.86
From Kinshasa.....	80.87	From Tumba.....	38.70

From Dolo.....	80.48	From Songololo.....	20.84
From Madimi.....	59.25	From Kenge.....	8.30

The rate for the whole distance covered by the table works out at about 37 $\frac{2}{3}$ cents per pound. This rate, however, is low as compared with that on ivory—87.

ABYSSINIA.

A RECENT statement issued by the Imperial Ethiopian Rubber Co., Limited [see THE INDIA RUBBER WORLD, June 1, 1907—page 274], mentions the shipment from their concessions in Abyssinia of 90,278 pounds of rubber, of which 62,800 pounds had reached London and over 50,700 pounds been disposed of. The company are also shipping coffee and wax.

THE TEXAS GUAYULE CONTRACT.

THE following letter relates to a rumor regarding a contract for the sale of guayule slumbs on the state school lands in Texas [see THE INDIA RUBBER WORLD, October 1, 1907—page 21]:

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am in receipt of yours of the 6th in which you state that you are informed that the Big Bend Manufacturing Co., of San Antonio, have let go their contract to purchase the guayule school land in Texas. You are advised that I know nothing about what they have done, more than to say that they have paid into the state treasury of Texas the full amount of \$61,000 on the contract.

Very respectfully, J. T. ROBISON,

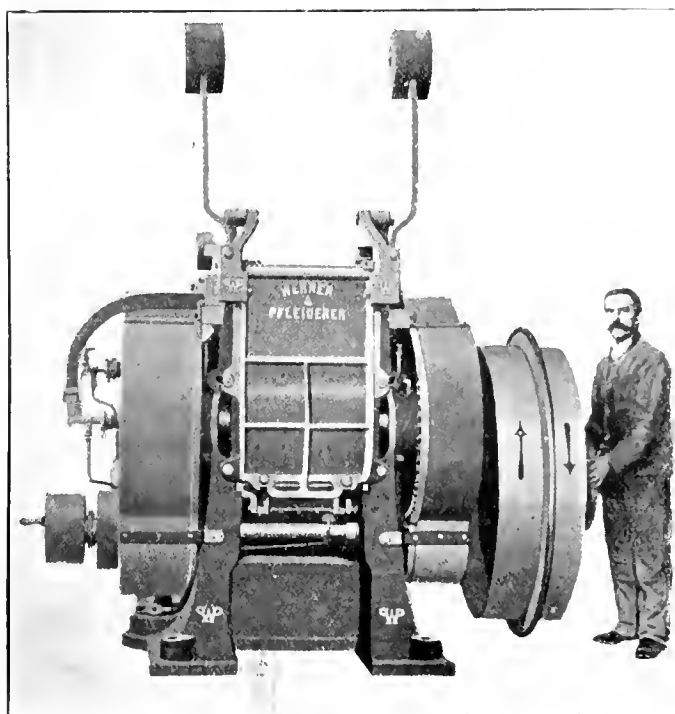
Acting Commissioner [General Land Office].
Austin, Texas, December 11, 1907.

A NEW invention is mentioned providing for the construction of telephone receivers so that the shell may be made largely of metal, only the cap—that part which fits over the ear—being made of hard rubber. The magnetic system is entirely insulated from the shell, being mounted on a hard rubber bushing which is secured in proper place within the casing. The new method is referred to as reducing materially the cost of receivers.

AMONG recent visitors to New York was Monsieur Louis F. Kerremans, of Brussels, who is identified with the management of *La Chronique Coloniale et Financière*, which journal is among the foremost of those interested in the promotion of the rubber culture.

RUBBER MIXING MACHINERY.

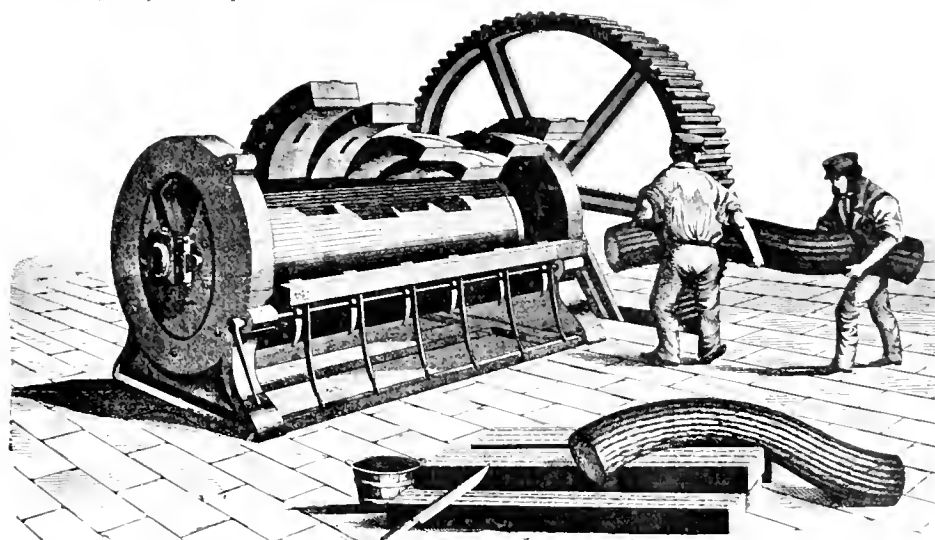
TWO types of machines for massing crude rubber, one English and the other American, have existed almost from the beginning of the rubber manufacture. The two-roll mixing mill developed at the Roxbury Rubber Works showed the American idea, and the massing machine invented by Thomas Hancock at Charles Macintosh's factory the English. Almost exactly the same types of mill mixers, only larger and stronger,



WERNER-PFLEIDERER PATENT MASTICATOR.
[Universal Kneading and Mixing Machine.]

are used in America to-day for massing, while the masticator, which is very largely used in European practice, is nearly the same as that which Hancock finally evolved.

One harks back to 1820 to find the beginning of the masticator. At that time, Hancock made a small wooden framed machine in which was a wooden cylinder studded with teeth that revolved in another cylinder, also toothed, in which the charge of rubber, only a couple of pounds, was put and the machine



HANCOCK'S MASTICATING MACHINE.
[From Hancock's "Personal Narrative."]

turned by hand until the gum was homogeneous. In 1840, however, new buildings and new machinery were put up at the Macintosh factory, and the "monster" masticator was installed. This took 200 pounds at a charge and was very successful. Of course, the Hancock patents of masticators have long ago expired and the big machinery builders have taken over the making of them, adding from time to time various improvements. One of the accompanying illustrations shows the modern up-to-date masticator as it is in use in hundreds of European rubber factories at the present time.

PARAGUAY.—Referring to a recent mention of native rubber trees in this republic, the United States consul at Asuncion reports that at this time little or no rubber is produced in the country, though undoubtedly considerable could be found along the northern frontier, a region which is almost wholly undeveloped. The Brazilian state of Matto Grosso exports rubber via the Paraguay river and Asuncion, but no record is kept in Paraguay of such shipments. Nicholas Bacz, in the *South American Journal*, says that a rubber tree known locally as "mangá-ice" is abundant in northern Paraguay, and is a good rubber tree, and also that the "manicoba" is found there. In 1800 the United States consul at Buenos Aires mentioned the "mangá-ice" tree as then yielding considerable rubber in northern Paraguay. The French authority, H. Jumelle, considers the "mangá-ice" tree to be *Hancornia speciosa*.

TOKIO EXHIBITION.—The total attendance at the Tokio Industrial Exhibition, in regard to which a report appeared in THE INDIA RUBBER WORLD of October 1 (page 21), is reported to have been 4,522,596 during the first 94 days, or over 48,000 per day. The highest attendance for one day was 116,000.

THE Passburg vacuum dryer, in use so successfully in rubber goods factories and also in the preparation of plantation rubber, is reported to have given good results in the drying of cacao in Kamerun, West Africa.

EXPORTS of crude rubber from Ecuador during 1906 amounted to 1,391,652 pounds, of which 1,185,600 pounds went to the United States.

ACCORDING to the year book of the Touring Club of Italy there will soon be 153 motor 'bus lines in operation in that country, many of them being subsidized by the government. It is suggested that a commercial vehicle competition should be held along with the touring car events during the Brescia automobile week next year. Baron Georges de Caters, of Belgium, after a sojourn of a year in Japan, recently arranged for a motor 'bus service in a large city in the latter country of 125 vehicles.

WITH a view to promoting commercial relations with foreign countries, and at the instance of the Associação Commercial of Amazonas, the tax levied on commercial travelers by that state and by the municipality of Manaus is to be removed.

AN American consular report refers to the introduction of rubber-tired jinrikishas in Rangoon, Burma, which promise to become as popular as they are in Singapore and Penang and various Chinese cities.

NEW TRADE PUBLICATIONS.

THE GUITA PERCIA AND RUBBER CO. OF TORONTO, LIMITED, issue a collection of catalogues of their products, the first of the new issue being their catalogue M-11, descriptive of Mechanical Rubber Goods of which they make an exceptionally full line. The catalogue includes their tire products, among which are pneumatics of the Fisk type and the endless solid Kelly-Springfield tires. Various items of sporting goods are included, and also fire hose accessories. This catalogue is handsomely bound in boards. [5 $\frac{1}{2}$ " \times 8 $\frac{5}{8}$ ". 132 pages.] A series of accompanying booklets are labeled respectively Rubber Belting, Rubber Hose, Rubber Packing, and Rubber Mats, each of these being fuller than the departments in the general catalogue devoted to these subjects. These booklets are of the same size pages as the general catalogue, and are run from 24 to 48 pages. The belting catalogue devotes considerable space to illustrations of Canada grain elevators which the company have equipped with rubber.

DAVID MOSELEY & SONS, LIMITED (Manchester, England), issued under date of November 1, a new price list of Vehicle Tires and Motor and Carriage Accessories, beginning with solid tires in many patterns, including those held in place by rim compression and longitudinal wires, no fewer than 140 patterns being illustrated, and weighing from less than 10 ounces to 5 pounds 10 ounces per foot in length. The catalogue includes also twin 'bus tires (solid), jirrikisha tires, carriage brake blocks, motor mats, tube cases, tire gaiters, horn bulbs, motor car hose, and motorists' toilet articles (rubber brushes and the like). The catalogue relates only incidentally to Moseley's detachable tire, their principal product in pneumatics. [7 $\frac{1}{4}$ " \times 9 $\frac{3}{4}$ ". 36 pages.]

HODGMAN RUBBER CO. (New York) issue a new illustrated price list of Druggists' Sundries and Miscellaneous Rubber Goods, illustrating their standard products and not a few novelties likely to prove of interest to the trade. [6 $\frac{1}{2}$ " \times 8 $\frac{7}{8}$ ". 53 pages.]

KANSAS CITY RUBBER AND BELTING CO. (Kansas City, Missouri), a new jobbing concern, issue a catalogue of mechanical rubber goods, including most of the articles usually listed under this heading. [5 $\frac{1}{4}$ " \times 7 $\frac{3}{4}$ ". 38 pages.]

JOHNSON & PHILLIPS, LIMITED (Charlton, Kent), issue a catalogue of Paterson's Aluminum Electric Cables, which are offered as having advantages over copper cables in certain circumstances. [7" \times 9 $\frac{1}{4}$ ". 8 pages.]

THE STAMFORD RUBBER SUPPLY CO. (Stamford, Connecticut) issue a brochure containing testimonials from important rubber manufacturers testifying to the good quality of their rubber substitutes. [3 $\frac{1}{4}$ " \times 6". 11 pages.]

FLEXIBLE RUBBER GOODS CO. (Winsted, Connecticut) issue a new catalogue, "Tubbing and Rubbing Wisdom," devoted to the details of their hollow tooth rubber brushes for toilet purposes. [3 $\frac{1}{8}$ " \times 6". 16 pages.]

SANITATSWARENHAUS LUTZ (Baden-Baden, Germany) issue a new illustrated catalogue of Hygienic Articles, of the importation of which they make a specialty. [4 $\frac{7}{8}$ " \times 7 $\frac{5}{8}$ ". 24 pages.]

HOOD RUBBER CO. (Boston) are distributing in the trade some booklets for general circulation, relating to rubber footwear, that are novel in character and certainly readable and amusing, while containing some very practical suggestions regarding waterproof shoes. Two of them are entitled "What He Knew About Her Rubbers" [3 $\frac{1}{8}$ " \times 6". 20 pages] and "Heard in the Coat Room" [3 $\frac{1}{8}$ " \times 6". 11 pages].

GENERAL ELECTRIC CO. (Schenectady, New York) include in their vast scope of production not only rubber insulated wire, but a large number of other articles embracing more or less rubber, to an extent which renders them very considerable rubber manufacturers. Their Specialty Catalogue No. 3463 is devoted

in part to the rubber goods referred to, including various types of insulating tape and splicing gum, fuses, insulating devices, and the like. [6 $\frac{1}{2}$ " \times 3 $\frac{5}{8}$ ". 212 + 133 pages.]

THE VICTOR RUBBER CO. (Springfield, Ohio) issue a catalogue of Rubber Mats and Matting, which they make in a great variety of styles and for very many purposes, including carriage and the like. [6 $\frac{1}{2}$ " \times 3 $\frac{5}{8}$ ". 212+133 pages.]

THE CELLULOID CO. (Nos. 30-36 Washington place, New York) have issued a new catalogue of goods of their manufacture, including brushes, combs, mirrors, toilet articles and fancy goods that is exceedingly attractive in appearance. It contains 524 well executed engravings of the articles listed. [6 $\frac{3}{4}$ " \times 10 $\frac{1}{4}$ ". 104 pages.]

ALSO RECEIVED.

THE Goodyear Tire and Rubber Co., Akron, Ohio.—The Care of an Auto Tire. 24 pages.

THE B. F. Goodrich Co., Akron, Ohio.—The Glidden Tour; What it Demanded and What it Proved [in tires]. 16 pages.

THE Fisk Rubber Co., Chicopee Falls, Massachusetts.—A Chapter of Accidents and Facts. [Tire troubles and their prevention.] 32 pages.

THE Bristol Co., Waterbury, Connecticut.—Bulletin No. 57.—Bristol's A. C.—D. C. Recording Voltmeter. 4 pages. Bulletin No. 61.—Bristol's Recording Voltmeters. 12 pages. Bulletin No. 62.—Bristol's Recording Ammeters, D. C. and A. C. 16 pages. Bulletin No. 63.—Bristol's Recording Wattmeters. 20 pages.

DAVID MOSELEY & SONS, Limited, Manchester, England.—Durability of Pneumatic Tires. 8 pages.

Hopewell Brothers, Cambridge, Massachusetts.—Hopewell Tire Case. 4 pages.

THE Springfield Tire and Rubber Co., Springfield, Ohio.—Springfield Abrasive Polishing Wheels and Blocks. 8 pages.

AJAX RUBBER CO. of California, Los Angeles.—Ajax Tires. 8 pages.

PRESOTT BROTHERS, Boston.—Prescott Brothers Rubber Store. Christmas Suggestions. 6 pages.

G. & J. Tire Co., Indianapolis, Indiana.—Proper Tire Construction. 12 pages.

THE Boston Tire Tread Co., Boston.—The Boston Tire Tread. 4 pages.

THE "So-Lite" Rubber Co., Rochester, New York.—So-Lite Pocket Rubbers for Women. 8 pages.

THE Diamond Rubber Co., Akron, Ohio.—Diamond Tires and the Vanderbilt Race. 12 pages.

DR. Jeanne Walter, New York.—Medicated Rubber Garments [for reducing flesh]. 12 pages.

THE G & J Tire Co., Indianapolis, Indiana.—"The Last (?) Ride Together" [a story; and] Proper Tire Construction. 28 pages.

THE Polack Tyre Co. (F. Poole, manager), London. (Factories at Waltherhausen, Germany.—Price List of "Superior" Solid Rubber Tires. 32 pages.

JOHNSON & PHILLIPS, Limited, Charlton, Kent, England.—(a) List of Wires and Cables, No. 14. 40 pages. (b) Electric Cable Making Machinery. 16 pages.

Hopewell Brothers, Cambridge, Massachusetts.—Automobile Fabric Supplies. 16 pages.

DUNHAM BROTHERS, Brattleboro, Vermont.—Catalogue of the Victor Brand of Rubber Boots and Shoes. 61 pages.

ROBINS CONVEYING BELT CO., New York.—Bulletins [No. 12 to No. 17, inclusive. Hoisting and Conveying Machinery, with Robins's Rubber Belts.] 108 pages.

COLONEL THEODORE AYRAULT DODGE, some time prominently connected with the rubber industry, was even then, as he had been before and has since been, at work upon a life of Napoleon, the final volume (the fourth) of which has just been brought out by his publishers, Houghton, Mifflin & Co. (Boston). This work is widely regarded as the ablest history of the military life of Napoleon that has been written in English. This work is part of a series devoted to the lives of great commanders, and Colonel Dodge is at work upon the history of Frederick the Great, the completion of which will mark the end of a program which has occupied him for more than 30 years.

THE New York shoe jobbing house of Nathaniel Fisher & Co. who are important as handlers of rubber footwear, has entered upon its seventieth year. The business has been a corporation since 1905, the president, Irving R. Fisher, and the secretary and treasurer, Nathaniel C. Fisher, being sons of the original Nathaniel Fisher, who died in 1880.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE long series of holidays which the governor of the state began to declare on October 31 are still being proclaimed from week to week, although conditions with the banks have so greatly improved that it is believed there will be no more special holidays after the first of the year. In Oregon the holidays have been discontinued and business has gone ahead with a very fair degree of prosperity. In the Washington state it was not necessary to declare holidays at all. The reports from all of the rubber houses, and from merchants generally in San Francisco is that there is a good amount of business, but the trouble is that it is almost impossible to get payments, while the eastern manufacturers, who are themselves in need of ready money, are pressing for remittances. Houses of the very best standing are frequently months behind in their payments, and yet the confidence is so great that merchants do not hesitate to sell them all the goods they want.

W. Perkins, president of the Sterling Rubber Co., on Market street, reports that they are keeping up a good stock, keeping all of their men out on the road, and that conditions are brightening, trade being much better now than it was three weeks ago. "I have come to the conclusion," he said, "that next year is going to be better than 1907 has been, notwithstanding that during portions of this year business was unusually good owing to the fact that there was an abnormal demand to re-stock with goods that had been destroyed in the big fire. A big business is settling towards the coast, and although a presidential election is in sight, it will not effect this coast much. Reports from the trade centers where this season's crops from California have been marketed show that the quality has been good and the products have brought high prices. All of the interior of the state is being exploited and developed, and in San Francisco the enormous building activity, and the great work which the municipality has commenced in reconstructing the streets and public properties are making conditions active everywhere. Besides, the big fleet of battleships will bring a great deal of business here."

The Pacific Coast Rubber Co. will remove early in January from their temporary quarters on First street to their new building at Nos. 416-422 Mission street. The new building is of modern type, with reinforced concrete to render it fireproof, and when the fixtures now being installed are complete it will be one of the finest rubber stores anywhere.

C. Kirkpatrick, of the San Francisco rubber trade, has returned the northern coast states and reports that he noticed everywhere that money matters were loosening up. In Oregon, where the holidays have been declared off, the banks are paying cash without any difficulty. "I met with a very good trade," he said; "everybody is adopting a careful and conservative system in buying, and they will all pull out all right. When normal conditions are entirely restored there will be a big business, because the dealers will have to buy to fill up their depleted stocks."

W. J. Gorham, of the Gorham Rubber Co., is paying rent on three or four establishments in Oakland and San Francisco, where his business has been scattered since the great fire, but he is now pulling everything together in his big new building on Fremont street, between Market and Mission, where he has a five-story building with a 60-foot frontage, a depth of 137 feet and 40,000 feet of floor space. He is fixing up the building to stay, having taken a fifteen-year lease at \$900 per month, and he is fitting it up with every convenience that money can buy. The basement is equipped with power and steam heat to run the factory and the three elevators, with an engineer in charge. In the basement storage room only full rolls of belting are kept, and when they are cut they are sent up to the mechanical department. No packing or unpacking is done on the main floor which is devoted for salesrooms and offices. One feature of the office is a separate room devoted to stock taking, where the sales are

deducted every night from the \$500,000 stock. The man in charge of this department does all of the ordering. The second floor is devoted entirely to mechanical goods. Separated from the other departments, on the rear of this floor is the bicycle department. The third floor is devoted to rubber boots and shoes and oil clothing. On the fourth floor is the factory and there will soon be installed some twenty presses. "I expect to do a \$2,000,000 business next year," said Mr. Gorham, "and that means a big stock and a lot of rustle."

The Phoenix Rubber Co. report that they have not had a poor month yet, but just now collections are extremely bad. They are getting their factory ready for a special output in tires after the first of the year, when they expect the conditions to be greatly improved.

Herbert K. Selby, representing the Boston Woven Hose and Rubber Co. in Oregon, Washington, Idaho, British Columbia and Alaska, is in San Francisco spending the holidays with Joseph V. Selby, the local representative of the firm.

ELECTRICAL NOTES.

THE annual electrical show in Chicago, to be held in the Coliseum on January 13-25, under the auspices of the Electrical Trades Exposition Co. promises to be of great interest as a medium for displaying a wide variety of domestic appliances, but the list of exhibitors does not include any of the leading companies in the insulated wire field.

A recent German patent granted to Robert Muller, of Munich, describes an insulating material claimed to be fireproof, and to have a high specific resistance which makes it compare favorably with rubber or porcelain. The process for making it consists in combining a fire resistant material, such as comminuted asbestos, with mineral pitch dissolved in a suitable solvent, so proportioned that a consistent plastic mass is formed, then subjected to heavy pressure, preferably in a cold state, and dried by the evaporation of the solvent. The proportions mentioned are 100 parts of mineral pitch dissolved in 20 parts of solvent; from 25 to 75 parts of solution may be used with 100 parts of asbestos. It is stated that the pitch used is so non-inflammable that it may be subjected temporarily to an electric arc without being burned up or softened.

FIREPROOF ELECTRIC CABLE.

CONSIDERABLE attention has been attracted in England by the results attained with a new fire resisting cable, after some rather remarkable tests. The cable is made up of the ordinary conductor, insulated with a thick lap of pure Pará rubber and vulcanized rubber, and taped. This is surrounded with several layers of manila paper with a solution to render it non-inflammable. Over this is a strong, flexible woven braiding of small steel wires, which in its turn is covered with more of the manila paper, the whole being finished with braiding of jute, also impregnated to render it non-inflammable. It is stated that the tests were quite successful and that the makers' claim proved true that the cable is amply able to hold the first flash and prevent ignition of the melted rubber. Even when red hot at one point, no flame was present nor did any of the incandescent portions tend to fall away from it. This is known as the Paterson cable and has been developed in the works of Johnson & Phillips, Limited, at Old Charlton.

* * *

PIRELLI & Co. (Milan, Italy) are reported to be manufacturing a cable for 100,000 volt circuits. The core is covered with a lead sheathing, after which comes a layer of rubber about 2.5 millimeters thick, and two other layers of rubber, respectively 2.3 mm. and 4.5 mm. thick. The latter is covered with a layer of impregnated paper 5.2 mm. thick. Lastly come a layer of hemp and a lead sheathing. The thickness of all the insulating layers is 15 mm. and the total diameter of the cable is 60 mm. [2.36 inches].

News of the American Rubber Trade.

BOSTON BELTING CO.—ANNUAL.

At the annual meeting of shareholders of the Boston Belting Co., held Nov. 29, these directors were elected: James Bennett Forsythe, J. H. D. Smith, Lewis M. Crane, Charles H. Moseley, Francis H. Stevens, William H. Furber, and George A. Miner. The board is the same as last year, except that Mr. Miner, a director some time ago, succeeds Edwin A. Hildreth, deceased. The officers were reelected: James Bennett Forsyth, president and general manager; J. H. D. Smith, treasurer and clerk. Thomas Lang, one of the three auditors, retires after 19 years' service, and is succeeded by Charles J. Upham. The balance sheet as of September 30, 1907, stood as follows:

ASSETS.	
Real estate—Lands and buildings.....	\$190,312.67
Machinery	235,707.70
Tools, furniture and fixtures	95,850.08
Cash	22,947.44
Bonds and notes and accounts receivable, investment account	701,956.85
Merchandise	1,022,260.15
Trade marks	100.00
Sundries	800.00
Total	\$2,260,934.89

LIABILITIES.	
Capital	\$1,000,000.00
Reserve Fund	800,000.00
Profit and loss	381,934.89
Notes payable	88,000.00
Total	\$2,260,934.89

The usual quarterly dividend of 2 per cent. was declared and was payable on January 1.

SAFETY INSULATED WIRE AND RUBBER CO.

It is announced that H. E. Huntington, widely known in railway circles, has acquired a controlling interest in the \$1,500,000 capital stock and \$1,228,000 outstanding bonds of the Safety Insulated Wire and Cable Co., and C. E. Graham, Mr. Huntington's representative in New York, has been elected vice-president of the company. The Safety company some time ago joined the combination known as the National Steel and Wire Co., one of the branches of which, the National Wire Corporation, went into the hands of a receiver early in the year and later was sold out. The Safety company has a very large business, and has filled extensive orders for the United States government.

Everett Bertram Webster, president of the National Steel and Wire Co., and a director in the Safety Insulated Wire and Cable Co., died suddenly on December 2 at Jacksonville, Florida. His home was at Lynn, Massachusetts.

NEW COTTON DUCK MILLS.

THE Passaic Cotton Mills, at Passaic, N. J. [see THE INDIA RUBBER WORLD, August 1, 1907—page 355], began operations on December 5. The product of the plant is the finest grade of cotton duck for fire hose and automobile tires and for other mechanical purposes. The company own the Worcester Rubber Tire Duck Co., in Massachusetts, which plant is still in operation, but will be shut down as soon as the new factory is able to cope with the demand. Catlin & Co., of New York, are the selling agents. George H. Hay, treasurer of the Fabrikoid Co. (Newburg, N. Y.), is president; R. P. M. Eagles, of Catlin & Co., is vice president; Louis R. Cowdrey, also of Catlin & Co., is secretary and treasurer, and the remaining directors are Frank Ball and Charles E. Sampson.

There is a movement on foot to organize a stock company for the erection of a mill at Morristown, Tennessee, for the manufacture of convertible cotton goods for the rubber and linoleum trades, to be capitalized at about \$150,000.

RECOVERY FROM A FIRE.

THE Leather Tire Goods Co. (Newton Upper Falls, Massachusetts) advise THE INDIA RUBBER WORLD that they have practically recovered from the effect of the fire in their plant which occurred on November 14. They are shipping goods and rapidly catching up on orders that had got behind. The company manufacture the Woodworth patent detachable steel studded leather treads for pneumatic tires. The building burned formed part of the plant of the old Newton Rubber Works.

A fire in the asbestos works of The H. W. Johns-Manville Co., Nos. 914-916 North Broadway, St. Louis, caused a loss to stock reported at over \$100,000, which is understood to have been fully covered by insurance.

NEW BUILDINGS AT STAMFORD.

THE new buildings of The Stamford Rubber Supply Co. (Stamford, Connecticut) will be of reinforced concrete. The main building is to be 50x122 feet and two stories high, with a three story extension 18x62 feet, and a one story power house 25x50 feet. The buildings will be well lighted and the equipment the best to be had, the power plant particularly having been designed with a view to the greatest possible economy in working. It is understood that the factory will have some features that are unique in the manufacture of rubber substitutes, and the capacity will be several times that of the old plant.

RECEIVER FOR THE PARA RECOVERY CO.

THE plant and business of the Pará Recovery Co., of Bayonne, New Jersey, have been placed in the hands of a receiver, upon the application of Robert E. Dearburg, filed on December 9. The court appointed Pierre F. Cook, of No. 1 Exchange place, Jersey City, who is referred to as being in this case a "com- placent receiver." It is asserted that the assets of the company are larger than the liabilities. The application for a receivership was voluntary on the part of the company, being due to the heavy drop in the price of the rubber in competition with which their products are sold, and the current monetary stringency.

HARTFORD RUBBER WORKS CO.

E. R. BENSON, who has been connected with The Hartford Rubber Works Co. for several years, being latterly secretary, has resigned to become identified with the Cadillac Motor Car Co., at Detroit, Michigan.

The Hartford Rubber Works Co. have removed their Boston business to larger premises in the Heard building, No. 817 Boylston street, which will be their only branch in Boston. They had been situated for six years in Atlantic avenue, and their reason for moving is to become more centrally located in the automobile district.

E. D. Robbins has secured an attachment against property of The Hartford Rubber Works Co. to the amount of \$150,000, in a suit in behalf of Louis D. Parker, former president of the company, who claims damages in connection with his retirement from that office in 1904.

The Hartford Rubber Works Co., in carrying out their annual custom of giving a Thanksgiving turkey to every employé of their Hartford factories, gave away this season more than four tons of the "national bird."

RECEIVERS FOR THE ELECTRIC VEHICLE CO.

THE Electric Vehicle Co., a New Jersey corporation formed September 27, 1897, with \$10,000,000 capital authorized (increased later to \$20,000,000) to manufacture automobiles, on December 10 went into the hands of receivers in two states. In New Jersey, in the United States circuit court, Halsey M. Barrett and Harry W. Nuckles were appointed receivers, and in New York, in the United States circuit court, Mr. Barrett and

William S. Montgomery were appointed ancillary receivers for the property of the company within the jurisdiction of that court. The company was organized with Isaac L. Rice as a moving spirit, owned the Selden patent for gasoline cars, and manufactured electric automobiles largely, with a plant at Hartford, Connecticut, the late George H. Day, of the Pope Manufacturing Co. being at one time president. The company established electric cab services in several cities, but of all the sub-companies the New York Transportation Co., controlling the electric cab business in New York City, alone survives. In 1899 the company paid dividends of 8 per cent. on the common and preferred shares, since which time no dividends have been paid. On November 1 last the company defaulted on the payment of \$2,600,000 in bonds. The bill asking for the appointment of receivers was filed by the Hartford Rubber Works Co., who allege that the sum of \$11,785.05 is due them. It is stated that a plan for reorganization is in preparation. The company, it is declared, was overcapitalized in the first instance, and the business will be restored and conducted under sound management.

NEW INCORPORATIONS.

JOHN B. THOMSON Revolving Rubber Heel Co., November 11, 1907, under the laws of New York; capital, \$100,000. To make rubber heels and rubber goods. Directors: John B. Thomson, W. J. Benedict, W. J. O'Brien, and Fred Knowlton, all of New York City.

Rochester Footwear Co., November 12, 1907, under the laws of New York; capital, \$25,000. To make rubbers, boots, and shoes. Directors: D. S. Donaldson, S. Schwartzchild, Albert J. Groh, and two others, all of Rochester, N. Y.

Mears Rubber Co., October 28, 1907, under the laws of New York; capital, \$50,000. To manufacture horseshoe pads. Directors: Camden Mears (No. 84 Saratoga avenue), Elmer E. Mears, and Frank Mears, all of Brooklyn, N. Y.

SPALDING & BROTHERS IN ENGLAND.

THE plant of A. G. Spalding & Brothers, athletic goods manufacturers, at Putney Wharf, London, from an extensive description in *The Sports Trader*, also of London, would appear to be the largest establishment of the kind in Great Britain, with a more varied line of products than any other, although it has been in operation only since April, 1906. From being dealers in England in American made products, the London house of A. G. Spalding & Brothers has become thoroughly English in its organization, selling only the output of its own factory on the other side. The general manager of the Spaldings' British business is Mr. Charles S. Cox, an Englishman, who came to America some years ago to take charge of the golf department of the Messrs. Spalding in their store in Nassau street, New York. In those days the golf balls preferred were those of English origin, little success having been attained by Americans in making such goods. But in an interview in *THE INDIA RUBBER WORLD* of July 1, 1899 (page 265), Mr. Cox declared: "This will soon be the greatest country for golf in the world," and he predicted that the increase in popularity of the game in America would bring into existence here a profitable production of golf balls. The American house of Spalding have now been for some years extensive makers of golf balls in America, and the British factory, in charge of Mr. Cox, is said already to be making 10,000 per week. The London house of Spalding make also footballs and cricket and hockey balls, and all the appliances of golf—clubs, caddie bags, and so on. In fact, they forge at their plant the only golfing irons made in the United Kingdom outside of Scotland. The most distinctive feature of these works is that they manufacture every part of the goods which they market, as is the rule with the parent house in America. It may be added that the London house does an important export trade, including the supplying of their goods to all the British colonies.

The business of A. G. Spalding & Brothers was begun in Chicago March 1, 1876, by Albert G. Spalding and J. Walter Spalding, who were joined two years later by a brother-in-law, William T. Brown, when the present firm name was adopted. The original capital was \$800. Albert G. Spalding had been an enthusiast in baseball from the time it became the national game in the United States, and the first business of his firm was the sale of baseball goods, made for them under contract. Later the policy was adopted of manufacturing all their own goods; their production extending gradually until all forms of athletic goods are now included. A capital of over \$4,000,000 is employed and over 3000 persons are at work in the firm's factories and stores in the United States, Canada, and Great Britain.

TRADE NEWS NOTES.

THE Empire Automobile Tire Co. (Trenton, N. J.) have opened a branch house in New York City, at Seventy-third street and Broadway, under the management of Marcus Allen, formerly manager of the Auto Equipment Co., of Detroit, Michigan.

The Continental Caoutchouc Co. (New York) have added two distributing agencies to their list: The Plant Rubber Co., at Minneapolis Minnesota, and Neustadt Auto and Supply Co., at St. Louis.

The Keasbey & Mattison Co. (Ambler, Pennsylvania), extensive manufacturers of asbestos products, in connection with which they are to an extent rubber manufacturers, have established a branch house in Omaha, Nebraska, at No. 1113 Harney street, where they will carry a large stock of their products.

Twenty-nine salesmen of Morse & Rogers, wholesalers of rubber footwear who are the exclusive handlers in New York and its vicinity of the products of the Boston Rubber Shoe Co., spent a day recently at the factories of this company, taking points on the construction of "Boston" and "Bay State" rubbers. During the day the visitors were entertained at lunch at the Malden Automobile Club.

Mr. W. H. Sheldon, well known in druggists' sundries, is with the importing house of Radigan, Rich & Co., No. 31 Barclay street, New York. He also has the agency of the Mitzel Rubber Co. (Carrollton, Ohio).

The Bristol Co. (Waterbury, Connecticut) are issuing three new bulletins concerning their electrical measuring instruments, which doubtless will be appreciated by engineers who sometimes are in a quandary as to the best type of instrument applicable for the loads for which they intend to design. These bulletins will be found helpful in selecting the proper instrument. They are No. 61, No. 62, and No. 63, and may be obtained on application.

Daimler Motoren-Gesellschaft, of Untertürkheim, Stuttgart, Germany, important manufacturers of automobiles, have had registered under the United States trade mark laws the word "Mercedes," for sheet rubber goods, solid and pneumatic tires, rubber boots, shoes and leggings, caps, jackets, waistcoats, cloaks, collars, and capes.

In answer to an inquiry it may be stated that the Chicago Rubber Club, organized at a meeting on April 12, 1905, is no longer in existence. Owing to the inability of some of the gentlemen elected to office to give the necessary time to carrying on such a club, the matter was dropped after a few months, and the preliminary fees returned to the subscribers.

Federal Rubber Co. (Milwaukee, Wisconsin) have appointed as their general sales manager Mr. O. S. Tweedy, who formerly was with The Diamond Rubber Co., and whose headquarters will be at the company's factory, at Cudahy, Wis. Mr. E. S. Tweedy will represent the Federal company in the states of New York and New Jersey, with headquarters in New York city.

CANADIAN TRADE NOTES.

THE annual meeting of the Rubber Boot and Shoe Jobbers' Association of Canada will be held in Montreal on January 21. The secretary is N. L. Martin, No. 64 Wellington street, West, Toronto. The Rubber Shoe Manufacturers' Association meets only when occasion demands it, though the meetings of the two associations often are coincident.

Mr. S. H. C. Miner, founder of the Granby Rubber Co., does not intend to be the last of his name in the rubber business. This is well proved by the presence of his nephew in the Granby factory, where he has been for some years quietly mastering every detail of the business until he now is in charge of the whole of the manufacturing end.

RESIGNATION OF MR. RYDER.

THE resignation is announced of Frederick T. Ryder from the position of assistant general manager of the Boston Rubber Shoe Co., with which corporation he has been connected for many years. Mr. Ryder was associated with the late Hon. Elisha S. Converse, the founder of the company, almost from boyhood,

and for years prior to the death of Mr. Converse was his private secretary. At the same time he filled the office of secretary, to which in time were added the duties of assistant general manager. For a long time he has been a director in the Easthampton Rubber Thread Co., becoming treasurer of that corporation in 1898. He has also been a director in several other corporations, besides being active in the social life of Boston and Malden, in which



FREDERICK THOMAS RYDER.

cities he is a member of several clubs. Mr. Ryder was born in Belfast, Maine, and educated partly there and partly in New Jersey.

TRADE NEWS NOTES.

THE trustee of the Milwaukee Rubber Works Co. (Milwaukee, Wisconsin), bankrupt, has been authorized to file a new bond for \$5,000, instead of the former bond for \$100,000, since the assets have been converted into cash and for the most part paid to the creditors. The plant was sold some time ago to a new company and is in operation.

The American Can Co., manufacturers of tin and metal cans for a very large number of purposes, have purchased the United Can Co., of San Francisco, for a consideration reported at more than \$1,000,000. The American company will now have a monopoly on the Pacific coast.

The young men, particularly if they are likable, are always welcomed by the trade, for they are to be the patriarchs one day, and perhaps the millionaires. This, by the way, is simply a preface to the announcement that a son of the Rubber Trading Co. (New York), or at least of a well known partner in it, Mr. Robert B. Baird, who is named Robert L. Baird, is now visiting the rubber factories in the interests of the house named.

The Colonial Sign and Insulator Co. (South Akron, Ohio) are well known makers of porcelain forms for rubber gloves, syringe bags, cots, and bust forms. The company have an extensive and admirably adapted plant and are turning out very excellent work.

A NEW RUBBER GOODS FACTORY.

THE Humane Rubber Horseshoe Co., whose officers have been hitherto in New York City, have secured a plant at Montgomery, New York (near Newburgh), with a view to making their own rubber cushioned horseshoes. They are equipping it for the manufacture of small mold work and repair stock for automobile tires. The company was incorporated October 26, 1903, under the laws of New York, with \$2,000. This has since been increased, one certificate to that effect having been filed October 1, 1904. F. D. Palmer and Philip Hasbrouck are mentioned in connection with the enterprise.

TRADE NEWS NOTES.

THERE has been no meeting of the Western Mechanical Rubber Goods Association, of San Francisco, since the fire in April, 1906. A member of the trade who was active in the organization writes to THE INDIA RUBBER WORLD: "The members of the association have been extremely busy since our disaster and have not been able to get together, but no doubt at a later date we will."

A report has reached Keene, New Hampshire, that Roland Stearns Pollard, a native of that town and superintendent and manager in charge of the plantation of the Yaveo Plantation Co., with headquarters at St. Joseph, Missouri, and a rubber estate near San Juan Evangelista, Vera Cruz, Mexico, was shot and killed by a foreman on the plantation on November 24. He was 26 years of age and had been with the company since 1903.

Federal Rubber Co. (Milwaukee, Wisconsin) are turning out a new reclaimed rubber, made under the patents of W. A. Koenigman, who has been made the manager of their works. They are not marketing any reclaimed rubber, but utilizing the product in their own manufactures. The results obtained from the new process have been very satisfactory and the company are largely increasing their facilities for reclaiming rubber.

An automobile tire made of reclaimed rubber, aluminum flake and a small proportion of sulphur, which had been running on a heavy touring car for more than six months and which was in virtually perfect condition, was recently on exhibition in an Akron store. It was regarded as a very substantial testimony to the rubber preserving property of Aluminum Flake.

The Buffalo Rubber Manufacturing Co. (Buffalo, New York), who manufacture rubber specialties for patentees and large consumers, have an attractive and up-to-date plant and the best possible facilities for turning out this class of work.

The L. & M. Rubber Co. are a new manufacturing concern located at Canton, Ohio, making a very attractive line of seamless goods. Messrs. John Lee and Harvey Miller compose the company, Mr. Miller having been for years successfully identified with the rubber trade in Akron and the vicinity. Mr. Lee, who has charge of the office department, is a successful young business man well known in Canton and its vicinity.

Mr. F. R. Moore, of The Akron Rubber Engineering Co., is a well known designer of rubber mills and factory equipment. Mr. Moore's work is not confined to designing but includes specification and superintendence of construction. His recent erection of the plant of the Star Rubber Co., at Akron, is a creditable achievement.

In regard to the financial situation, Albert B. Beers (broker in crude india-rubber and commercial paper, No. 68 William street, New York), advises: "During December the market for paper has remained in the same condition as in November, there being only an occasional demand, mostly from out-of-town banks, and ruling rates being 9@10 per cent. for anything in the rubber line."

To accommodate their growing American business The Hanover Rubber Co., Limited (Hannoversche Gummi-Kamm Co., Actiengesellschaft), have established an independent agency for the United States and Canada at No. 27 West Fourth street, New York, in charge of Mr. Julius Lehmann, who has been American representative since 1884, associated with George Borgfeldt & Co. Mr. Lehmann will also represent Phil. Penin, Gummiwaren-Fabrik, Actiengesellschaft, of Leipsig.

CONDITION OF THE INDUSTRY.

SEVERAL rubber shoe factories were idle during the last two weeks in the year, due to the unsettled condition of business and the policy of not manufacturing for stocking purposes. Notices of curtailment of work began to be given immediately after the financial flurry reported in these pages a month ago, and it was stated that goods would be made only on actual orders. In several cases there has been more activity than was expected, and the condition of the industry is more favorable than was forecasted by the earlier reports. A member of the trade estimates that the snowfalls during the first half of December gave such an impetus to the movement of stocks of rubber footwear as to call for a further two weeks' production. It is expected that the factories generally will be in operation from the beginning of the year.

Both in the footwear and some other branches some factories have been running on shorter time, or with reduced forces. On the other hand, a number of factories have been fully employed. It has been pointed out that certain factories depending chiefly upon demands from railway and other large corporations have felt the loss of business more severely than those concerns whose trade is more general in character. Concerns having a large number of dealers as customers have enjoyed a more constant demand than those who supply each a limited number of corporations.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending December 21:

COMMON STOCK.

Week	Nov. 30	Sales	1150 shares	High	17	Low	14
Week	Dec. 7	Sales	5775 shares	High	23 ³ / ₈	Low	17 ⁷ / ₈
Week	Dec. 14	Sales	2310 shares	High	22	Low	18 ³ / ₈
Week	Dec. 21	Sales	805 shares	High	19 ¹ / ₂	Low	18 ³ / ₄
For the year—High, 52 ¹ / ₂ ; Feb. 10; low, 13 ¹ / ₂ ; Nov. 21. Last year—High, 59 ¹ / ₂ ; low, 38.							

FIRST PREFERRED STOCK.

Week	Nov. 30	Sales	1510 shares	High	67	Low	64 ¹ / ₂
Week	Dec. 7	Sales	2330 shares	High	80	Low	68 ³ / ₄
Week	Dec. 14	Sales	1454 shares	High	79 ¹ / ₂	Low	74 ⁷ / ₈
Week	Dec. 21	Sales	1100 shares	High	76 ¹ / ₂	Low	75
For the year—High, 109 ⁷ / ₈ ; Jan. 7; low, 61 ¹ / ₂ ; Oct. 30. Last year—High, 115; low, 104 ³ / ₄ .							

SECOND PREFERRED STOCK.

Week	Nov. 30	Sales	200 shares	High	41 ³ / ₄	Low	41 ³ / ₄
Week	Dec. 7	Sales	650 shares	High	48 ¹ / ₂	Low	42
Week	Dec. 14	Sales	120 shares	High	45	Low	45
Week	Dec. 21	Sales	160 shares	High	45	Low	45
For the year—High, 78 ¹ / ₈ ; Jan. 7; low, 39; Nov. 21. Last year—High, 87 ¹ / ₂ ; low, 75.							

SHOE WHOLESALE DISCUSS RUBBERS.

THE ninth annual meeting of The Western Association of Shoe Wholesalers was held December 14 at the Grand Pacific Hotel, Chicago. The chief topic of discussion was the rubber footwear situation, which was considered satisfactory as far as terms and discounts were concerned. Jobbers and retailers are carrying large overstocks. The jobbers all expect curtailment in the volume of leather and rubber shoe business this year. E. F. Carpenter, of Chicago, was elected president and C. L. Swarts, of St. Louis, vice president. S. W. Campbell, of Chicago, was reelected secretary. His address is No. 218 La Salle street.

TRADE NEWS NOTES.

THE United States Rubber Co. have leased the premises at No. 140 Essex street, Boston, for a term of years, to be occupied as their Boston offices after the expiration of their lease of No. 101 Milk street.

The Elkhart Rubber Works (Elkhart, Indiana) are erecting a considerable extension to their plant.

The Western Rubber Co. (Goshen, Indiana) have just closed the most prosperous year in their history. They are distributing an attractive new catalogue of their mechanical rubber goods products.

TRADE NEWS NOTES.

Why it is that the Arkay Rubber Co. (New York) of pure rubber bands, have chosen the tortoise as a trade mark for them is a guess. Not that the brass paperweight in the shape of a tortoise is not attractive, but it suggests slowness, of which the Arkay people know very little. It may be that the tortoise in question is a "snapper," and so are rubber bands.

Harburger & Stack, import and export commission merchants, No. 27 Ferry street, New York, have become incorporated under the laws of New York state, with \$200,000 capital, to provide for the continuation of the business since the recent death of John Harburger. Richard E. Stack is president, and Edward T. Robertson, who now comes into the business, secretary and treasurer. Harburger & Stack, through their New York connections, are considerable importers of crude rubber.

The Marvel Rubber Co. (see THE INDIA RUBBER WORLD, September 1, 1906, page 105), engaged lately in making molded rubber slides in one of the buildings of the National India Rubber Co. (Bristol, Rhode Island), stopped work about the first of December and probably will not resume.

Edgar Watson, for six years manager of the rubber footwear department of the Friedman Shelle Shoe Co. of St. Louis, has taken the management of the rubber department of F. Mayer Boot and Shoe Co. of Milwaukee. The latter company make a specialty of the "Wales-Goodyear" lines.

The regular quarterly dividend of 13 1/2 per cent on the preferred shares of the Rubber Goods Manufacturing Co. was payable on December 16.

The New York Park board has adopted a regulation prohibiting vehicles having rubber tires over which chains are used from running through any parks, or the various drives or roads—such as the Riverside drive—over which the board has control. The organized automobilists of New York and vicinity are protesting strongly against this regulation.

President Dunn, of The Fisk Rubber Co., was quoted on December 22 as saying that their tire factory had been running day and night, and that the employees laid off a few weeks earlier were now working overtime.

Permission has been granted to the receivers for The Pope Manufacturing Co. to continue the manufacturing business for four months from December 28.

A handsome album of views of "The World's Greatest Zinc and Lead District," around Joplin, Missouri, embraces fine pictures of the works of the Picher Lead Co. in that town, the products of which are so widely known in the rubber trade; also views of the residences of three members of the Picher family, who own the works.

The Waste Rubber Co., Limited (London), who have established an office at No. 10 Broadway, New York, in charge of Arthur B. Cooper, have registered the trade mark "Nestor" for their various shredded qualities of waste rubber.

An appreciative rhymester who is evidently a user of Bailey's "Won't Slip" tread tires has written a poem of six stanzas which has been very much quoted. The following is a sample verse:

They are not skidders that *skidoo*,
All roads are pleasure roads to you;
The "Won't Slip" Tread says every lip,
Is rightly named "Won't Slip."

WANTS AND INQUIRIES.

[460] WANTED names of companies who sell wooden soled rubber or leather boots.

[461] "Please give us the address of some manufacturers of improved clothes, suitable for waterproofing, for linings and coverts."

[462] Names and address of manufacturers of firemen's helmets.

[463] Who supplies pontianak and timo gums?

NEW YORK TO PARIS BY MOTOR.

AN automobile tour from New York to Paris has been projected, under the joint auspices of the *New York Times* and *Le Matin*, of Paris. The route proposed traverses Alaska, to Bering strait, beyond which it is to continue through Siberia into Russia in Europe and thence to Paris. The entrants have in prospect the most severe conditions, long continued, that have yet had to be considered in an automobile tour—extreme cold, great stretches of snow and ice, and long distances without roads. But in spite of these drawbacks a number of entries for the trip have been recorded, and the event is being looked forward to with lively interest by automobilists in America and Europe, and particularly by men experienced in racing affairs.

Naturally many new features of construction have been suggested to automobile manufacturers, but in place will be considered only the special points relating to tires that have been brought out. In this connection, a practical rubber man submits the following to THE INDIA RUBBER WORLD:

"What of the rubber tires? While running there may be friction enough to keep them flexible, but standing over night at 40° or 50° below zero, will they freeze and become brittle? Will it be necessary to furnish them with fur coats to keep the arctic atmosphere from stealing all of their heat? Certain it is that if the rubber be heavily compounded it will freeze and crack. That has been proved in Canada and Russia, where cheap rubber shoe soles become as brittle as glass. By the same record good rubber soles, that is soles made of a rich compound, stand up in any sort of cold. But again this is not an absolute test, for the shoe compound is radically different from the tire compound, and differently cured. This we know, unvulcanized rubber will become as rigid as iron at 20° below zero. Will then the tire that has a sheet of unvulcanized stock between the fabric and the tread freeze and break there, or has enough sulphur been absorbed by it to cure it? Then, too, how about repairs? Rubber in solution is not cured. Will not the cement freeze and let go? And if cured by sulphur chloride on the spot will it stand up as if cured by heat?

"The chances are that the tires will stand up with reasonable care. If it is too cold, as cold as liquid air, which it cannot be, they would be as brittle as glass; that has been proved. At all events no one will watch the tour more carefully than rubber manufacturers, and none be so ready to profit by any knowledge gained. If it is found necessary to invent a low resistance compound for extreme cold, they are as capable of doing it as they were to produce high resistance compounds to resist superheated steam. For a guess the wise motorist will have tires that are as nearly pure gum as is consistent with toughness, and flexible leather covers well studded with antiskids for rough and icy places."

Meanwhile some experiments have been made by Mr. David Hays, manager of the Healy Leather Tire Co. (New York), to determine the effect of severe cold upon rubber tires. The experiments were made in the factory of the Liquid Carbonic Co. (New York), who make a business of compressing carbonic acid into tanks for inflating tires in garages. Ordinary pressure in the tanks is not sufficient to produce a marked degree of cold as the gas enters the tire. To produce excessive cold, gas under enormous pressure was allowed to escape into the atmosphere, the expansion drawing heat from the gas and causing part of it to solidify, the solidified gas or "carbonic snow" having a temperature of about 108° below zero.

A glass vessel containing alcohol was packed with this carbonic snow, the temperature of the alcohol slowly going down. Then strips of vulcanized rubber—taken from tire tubes, for instance—were cut up, doubled over, and held in a little clip, which could be instantly removed. When the rubber was warm it would spring back instantly into its flattened shape. These samples of rubber were then placed in the cold alcohol, and as

the temperature dropped well below zero the rubber began to lose its elasticity. Between 30° and 40° below zero its action was quite sluggish, and when the clip was removed after the sample had been subjected to the cold for a short time the rubber straightened out very slowly. By reducing the temperature to between 40° and 50° below zero the rubber was found to harden in the position in which it was held by the clip, and when this was removed the rubber remained in its doubled-up position for some time, gradually unbending as the heat from the atmosphere warmed it.

It was also shown by the experiment that the purer the rubber, that is to say, the less amount of compounding with other materials, the better its ability to withstand extreme cold. For a pneumatic tire, however, it is impracticable to use pure Pará rubber and sulphur on the tread, the reason being that it would be too tender and unable to give service on the road. Another test made was to insert a piece of rubber into the frozen carbonic acid, and it was found that, after being left there for a minute or two, it had frozen solid and under the blow of a hammer it was shattered like vulcanite.

On the other hand, a piece of leather such as is used for auto tires was placed in this extremely cold substance for a considerable time, and when removed showed absolutely no change, being as pliable before as after.

Many motorists believe that it will be impossible to use pneumatic tires over a large part of the New York-Paris route, for which reason a detachable steel rim has been devised, taking the place of a pneumatic tire. This steel run or tire is to be fitted with steel spikes for use for travel over ice or in exceptionally rough and rocky places. Still another suggestion is that graphite may be used instead of lubricating oil, on account of the liability of the latter to freeze.

DEATH OF LORD KELVIN.

THE Right Hon. Lord Kelvin (Sir William Thomson), who probably had contributed more to the development of physical science than any other one individual, and who was one of the most remarkable men his race has produced, died at Glasgow on December 17, in his eighty-fourth year, and was buried on December 23, in the nave of Westminster Abbey, with the highest honors in the power of the British people and government to confer. The son of a professor of mathematics, young William Thomson soon distinguished himself in this branch of science. He entered the University of Glasgow at the age of ten as a student, and at his death he was chancellor of the university, his connection with the institution, in some form, having been almost continuous meanwhile. He was particularly distinguished by the results of his researches in the electrical field, and was knighted by Queen Victoria in recognition of his work in connection with the first successful Atlantic cable. His elevation to the peerage likewise was an honor conferred on account of his contributions to electrical and engineering science. Lord Kelvin paid several visits to America, one of them being in connection with the electrical development of Niagara Falls.

Rubber Scrap Market.

THERE have been so few transactions in rubber scrap for the past few weeks that the market is practically without quotations. The reclaiming mills have been working on a reduced scale, and dealers in scrap report that there is actually no inquiry. In the circumstances it would appear not to be worth while to attempt to state any prices. It might be mentioned that a few sales of domestic old shoes have been reported in the neighborhood of 8 cents for carload lots, but this affords no guide to what prices may be when the market becomes active again.

INDIA RUBBER MISCELLANY.

IDENTIFICATION OF PLANTATION RUBBER.

A RESOLUTION passed by The India Rubber Manufacturers' Association, of Great Britain, instructed their secretary to write to the governors of Ceylon and the Straits Settlements, "asking them to cause it to be known that English manufacturers recommend planters to register trade marks for their various brands of rubber, in order to facilitate the identification of these brands, and point out that this would assist planters growing the best rubber to obtain enhanced prices." The two governors, in acknowledging the communication, promised to give publicity to the request. While planters have not registered trade names as yet, the plantation rubber from the Far East offered at the London auctions is, as a rule, accompanied by the names of the estates producing it, or of the proprietary companies, so that manufacturers who care to do so may learn the exact source of any plantation rubber they purchase.

THE NICARAGUA RUBBER PROSPECT.

THE Bluefields *American* reports: "The rubber planting industry in the section of Pearl Lagoon, which received such a drawback by the late hurricane [See THE INDIA RUBBER WORLD, January 1, 1907—page 113.] is being steadily pushed by the renewed ambition, energy and confidence of the planters engaged in the business. They were for a time crippled, but not killed nor conquered and the damages referred to have had, in effect, a tendency of stimulating their efforts with a view of realizing the success which the industry must produce within a short period of years."

The United States consul at Bluefields reports that where rubber trees (*Castilloa*) were blown down, but not uprooted, they are sprouting freely, so many shoots having come up that the original number of trees is not likely to be lessened.

USES FOR PLANTATION RUBBER.

REFERRING to a published intimation that plantation rubber finds only a limited number of uses, a London importer on an extensive scale informs a *Times of Ceylon* correspondent that such has not been his observation. He says that to his knowledge plantation rubber is being used for inner tubes and is being experimented with in tires. "There is no doubt," the correspondent writes, "that as shipments become large, plantation rubber is attracting the more general attention of the trade. I heard the other day of a large manufacturer who has been experimenting for some time with samples sent him by a produce broker, and he has now decided to become a regular buyer. It is thought that, when he comes upon the market in earnest, it will make an appreciable difference in quotations."

RUBBER IN LIBERIA.

THE British consul at Monrovia reports the existence of much rubber in Liberia, and that its collection is becoming increasingly popular among the natives. One man can gather as much as 3 pounds a day, for which he is paid a shilling a pound. This is better than any other wages paid, and the work is comparatively easy. According to the consul, the agreement now existing between the government of Liberia and the Liberian Rubber Corporation is that the latter shall pay a royalty of 4d. per pound [= \$8.11, gold, per 100 pounds] upon all rubber exported from the country. Any one may collect rubber by gaining the consent of the corporation and paying to it 4d. per pound for all rubber collected. The company has advanced to the government £100,000 to aid in developing the country.

RUBBER IN NIGERIA.

IN connection with the rubber situation in Nigeria, the colonial administration is severely criticized in the London *Daily Mail* by Frank E. Verney. In December, 1901, and later, proclamations were issued, prohibiting the gathering of wild rubber without a license. Not only was this restriction distasteful to the natives,

who considered it in the light of having to pay for what they already, but the local officials are charged with lack of tact in dealing with the natives, thus unnecessarily causing friction. It is asserted that many natives bound for the first time of the restrictive laws when on their way to market, through the seizure of their rubber as contraband, and the result has been to discourage the collection of rubber. Furthermore, the forestry department is accused of advocating to the natives a method of tapping the rubber tree (*Latexia elastica*), which has proved extremely harmful and threatens the extinction of the species.

PLANTING STILL ACTIVE IN THE EAST.

IN spite of the large area already planted to rubber in Ceylon and the Malay States, the perusal of recent reports of the various companies in this interest would indicate no lessening of activity in planting. Taking at random the reports of twenty companies lately published it appears that they have standing a total of 14,589 acres in rubber, of which 7,837 acres were planted during the year last closed, and 3,527 acres in the preceding year, while almost without exception extensive planting is planned for 1908. The various companies seem likely to plant this year as much if not more than last year, and a similar condition seems to prevail throughout the planting districts. At the last meeting of the Kallutara District Planters' Association it was stated that 6,038 acres were planted to rubber in the district in 1905, and 14,178 acres in 1906. The rubber production in the district was 161,978 pounds in 1905, and 195,766 in 1906. The estimated production this year is 253,770 pounds.

A FRENCH AUTOMOBILE FACTORY.

THE extensive automobile factories of A. Darracq & Cie., Limited, at Suresnes, a suburb of Paris, covering an area of over 60,000 square meters [= 15 acres] and employing 3,000 workers, are now producing at the rate of 10,000 cars a year—of all kinds, from the *voiturelle* of 6 H.P. to the powerful eight-cylinder racing monster. Darracq is on the list of competitors for the concession for all the motor buses in the municipality of Paris, and has lately concluded with a group of London financiers a contract for the supply of 20,000 motor cabs, to be delivered within ten years.

BUSINESS OPPORTUNITIES IN PERU.

WRITING on this subject from Iquitos the United States consul, Mr. Eberhard, says: "Iquitos's prospects for continued success and advancement may be said to be based absolutely upon the rubber industry. It is true that the forests are wonderfully rich in cacao, hard woods, and trees and herbs of medicinal qualities, etc., yet it will be many years, if ever, before these articles can be exported in quantities to be of any great commercial importance to the town. It seems certain that they can never become so greatly in demand as rubber."

RUBBER ESTATE REQUIREMENTS.

THE advertisements of a leading business house at Kuala Lumpur (Federated Malay States) in a local newspaper mentions the following as desirable for equipping a rubber plantation:

Tajabs	Barbed Wire	Cross-cut saws
Pengalis	Wire Netting	Hand Saws
Bill Hooks	Rubber Knives	Rubber Trays
Changkols	Farrier Knives	Rubber Sprouts
Parangs	Pruning Knives	Pickaxes
Assam Forks	Rain Gauges	Rakes
Scythes (Elephant)	Nails	Iron Safes
American Axes	Rubber Cups	Boiled Rice

A GENERAL meeting of the shareholders of the Compania Guayulera Mexicana, S. A., was held on October 31 at the company's offices, in the city of Mexico, Calle de San Fernando No. 41. The report of the council of administration was approved and vacancies in the council filled.

The Continental Rubber Co., according to *The Mexican Herald*, have been adding an important amount of machinery to their plant at Torreon, thus largely increasing its capacity.

GROWING INSULATED WIRE TRADE.

THE sentiment of the rubber insulated wire trade is that a steady growth is to be expected. While the recent financial stringency doubtless has interrupted the projecting of new building enterprises, a vast amount of building already planned is being carried on without interruption, and a return of activity in new planning is looked for in the near future. The point is that modern city buildings call for a great deal of electrical wiring, and to-day this is nearly all rubber insulated. Single buildings in course of erection in New York will require from \$100,000 to \$200,000 worth of electric wires—for lighting, for telephones, for messenger services, and so on—all services which have been introduced within a generation.

The electrification of railways everywhere has promoted the demand for insulated wires, and modern steamers require large amounts. On war ships nowadays everything except their actual propulsion is done by means of electricity, and calls for insulated wires—practically all rubber insulated. Like everything else, insulated wires must be replaced periodically, and a leading electrical engineer points out that the amount of electrical equipment now installed for various purposes is so great that the necessary replacements alone will call for enough insulated wire to prevent the industry from ever becoming really "dull" again.

For some time past most of the rubber insulated wire factories in the United States have been run overtime—some of them double time. The most that has resulted from the recent business trouble has been to reduce the activity to normal working hours. The reduced cost of materials is expected to stimulate the business. In July last the "base price" for bare copper wire was 23 cents per pound, and about the middle of October it had fallen to 15 cents. There has been a slight advance since, recent quotations being about 16½ cents a pound.

"There was a time, not so many years ago," said a member of the insulated wire trade, "when many people actually were afraid to use rubber insulated wires. In every case of fire the cause of which was in any way obscure, it was set down as 'defective insulation,' until the fire underwriters in a single year estimated that \$100,000,000 damage had been caused by fires from this source. The insulated wire people and the electrical engineers then began to get busy, with the result that systematic

inspection of wires was adopted, and better methods of installation. It is now possible, in a great number of cases, to prove positively whether a given fire resulted from defective insulation, and one seldom hears this cited as the cause of a fire. Moreover, under the system of marking each manufacturer's output of wire specifically, it is possible in every case to know the source of the wire, whether it is at fault in causing a fire or otherwise. The general result, therefore, has been to render rubber insulation more popular than ever, and for many purposes it is the only wire insulation that will be accepted by the fire underwriters. For in addition to its positive good qualities, the old fear of rubber insulation has disappeared."

ASBESTOS NOTES.

THE Asbestos Products Co., of Hartford, have been incorporated under the Connecticut laws, with \$50,000 capital, to mine asbestos in that state or elsewhere, and to use the same in manufacturing. Henry E. Chapman is president and treasurer, Frank J. Betts vice-president, and George O. Brett secretary—all of Hartford, Conn.

The United States Asbestos Co., organized last year by parties at Burlington, Vermont, to mine asbestos at Eden, in that state, have begun the erection of a refining plant, to handle 200 tons of rock daily.

A good business is reported to have been done among the thrifty class of some localities in the sale of "fireproof" boxes, alleged to be of asbestos, for the safekeeping of valuable papers. In nearly every neighborhood, some purchaser, yielding to curiosity, has tested his purchase in the fire, with the result that his box has been of little further use.

LONDON CABS.—There appears to be a falling off in the number of horse drawn cabs on London streets. The number of such vehicles licensed during the year ended May 31, 1906, was 10,792, while during the year ended May 31, 1907, only 10,251 were licensed. Meanwhile the number of licensed motor cabs increased from 53 to 284. No doubt the business done by the motor buses, carrying in the aggregate millions of passengers, has brought about a lessened demand for cabs.

Review of the Crude Rubber Market.

THE condition of dullness which characterized the market at the date of our latest report has continued during the month, assuming meanwhile, if possible, a degree more pronounced. The reasons then recited for the interruption to the demand from manufacturers still have their weight, and buying for current needs has almost come to a standstill. Added to this is the custom of stock taking at the end of the calendar year, when manufacturers avoid having on hand a surplus of raw materials.

The general outlook for business, however, is more hopeful than was the case a month ago, as indicated in other columns of this issue. While buying manufactured products in all lines continues on a reduced scale, this condition cannot last indefinitely; indeed, from many parts of the country signs of improvement are reported already. But until existing stocks of goods are worked off the consumption of raw materials is likely to be confined to meeting actual current demands, for rubber manufactures as well as in all other lines. For the present, therefore, the crude rubber market remains unchanged, and what the future of prices is to be can be determined only after a more general renewal of business activity.

The Pará crop so far is slightly smaller than for the same months in several former years, those these figures have little bearing upon the general situation. In other words, the quantity

arrived by the middle of the season forms no basis for estimating the total production for a year. During the last half of the 1905-06 season, after arrivals had been normal for six months, the quantity reaching Pará exceeded by 3485 tons the receipts for the corresponding period one year before. It may be that this year the lower prices that have prevailed for some months may curtail production, though usually operations in the field are not so quickly affected by the prices in consuming markets.

Arrivals at Pará of rubber of all grades (including caucho) for the first half of several crop years—July 1 to December 31 inclusive—have been as follows, in tons:

	1904.	1905.	1906.	1907.
July	1,250	1,450	1,840	1,370
August	1,260	1,300	1,690	1,500
September	1,780	2,200	2,070	2,410
October	2,820	3,580	3,030	3,200
November	2,800	2,890	3,480	3,200
December	3,390	3,270	2,610	21,095
Total	14,300	14,690	14,720	12,775

[a—To December 18, 1907.]

At the Antwerp auction, on December 13, of 232 tons of rubber exposed, only 130 tons found buyers, at lower prices, the decline in some cases amounting to 85 centimes per kilogram [=about 7½ cents per pound].

MASSACHUSETTS CHEMICAL CO.

WALPOLE, MASS., U. S. A.

Operate Walpole Rubber Works, Walpole Varnish Works.

RUBBER MANUFACTURERS CAN SAVE MONEY BY USING OUR

No. 17 RUBBER FLUX No. 48

It permits additional compounding and puts old stocks in a merchantable condition

Our Flux is used extensively by wire manufacturers for slicking and weatherproofing. Write for prices and samples. We are the largest manufacturers of Friction Tapes in the world. If interested write us about Friction Tape and Cloth.

Following are the quotations at New York for Pará grades one year ago, one month ago, and December 30—the current date:

PARÁ.	Jan. 1, '07.	Dec. 1, '07.	Dec. 30.
Islands, fine, new.....	118 @ 119	72@ 73	70@ 77
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	123 @ 124	83@ 84	82@ 83
Upriver, fine, old.....	127 @ 128	86@ 87	84@ 85
Islands, coarse, new.....	71 1/2 @ 72	44@ 45	50@ 51
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	97 @ 98	66@ 67	65@ 66
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet....	76 @ 77	50@ 57	56@ 57
Caucho (Peruvian), ball.....	95 1/2 @ 96	66@ 67	65@ 66
Ceylon (Plantation), fine sheet	137 @ 138	93@ 94	95@ 96

AFRICAN.

Sierra Leone, 1st quality.....	77@ 78	Lopori ball, prime.....	75@ 76
Massai, red.....	77@ 78	Lopori strip, prime.....	72@ 73
Benguella.....	55@ 56	Madagascar, pinky.....	64@ 65
Accra flake.....	12@ 13	Ikelemba.....	none here
Cameroon ball.....	59@ 60	Soudan niggers.....	72@ 73

CENTRALS.

Esmeralda, sausage....	60@ 61	Mexican, scrap.....	60@ 61
Guayaquil, strip.....	50@ 51	Mexican, slab.....	46@ 47
Nicaragua, scrap.....	60@ 61	Mangabeira, sheet.....	44@ 45
Panama.....	48@ 49	Guayule.....	32@ 33

EAST INDIAN.

Assam.....	75@ 76	Borneo.....	33@ 34
Late Pará cables quote:			
Per Kilo.		Per Kilo.	
Islands, fine.....	38500	Upriver, fine.....	48500
Islands, coarse.....	28200	Upriver, coarse.....	38100
Latest Manãos advices:		Exchange.....	
Upriver, fine.....	48500	15 7/32d.	
Upriver, coarse.....	28500	Exchange.....	

NEW YORK PRICES FOR OCTOBER (NEW RUBBER.)

	1907.	1906.	1905.
Upriver, fine.....	.98@ 1.06	1.22@ 1.24	1.22@ 1.30
Upriver, coarse.....	.84@ .88	.93@ .96	.80@ .93
Islands, fine.....	.91@ .99	1.19@ 1.21	1.19@ 1.27
Islands, coarse.....	.56@ .59	.68@ .73	.69@ .71
Cametá.....	.55@ .62	.69@ .72	.70@ .72

NEW YORK RUBBER PRICES FOR NOVEMBER (NEW RUBBER).

	1907.	1906.	1905.
Upriver, fine.....	.83 @ .99	1.22 @ 1.24	1.21 @ 1.24
Upriver, coarse.....	.68 @ .85	.95 @ .97	.89 @ .91
Islands, fine.....	.72 @ .92	1.18 @ 1.20	1.18 @ 1.21
Islands, coarse.....	.44 @ .56	.71 @ .73	.68 @ .72
Cametá.....	.42 @ .56	.70 @ .71	.69 @ .72

Para Rubber (Excluding Caucho).

NEW YORK.

	Fine and Medium.	Total Coarse.	Total 1907.	Total 1906.	Total 1905.
Stocks, October 31.....Tons	119	51 = 170	125	227	
Arrivals, November.....	1018	313 = 1331	1556	1281	
Aggregating.....	1137	364 = 1501	1681	1508	

Deliveries, November.....	1007	290	1366	1583	1354
Stock, November 30.....	70	65 = 135	98	154	
PARÁ.					
1907.	1906.	1905.	1907.	1906.	1905.
Stocks, October 31.....Tons	417	140	155	595	500
Arrivals, November.....	2945	3065	2725	1411	803
Aggregating.....	3362	3205	2880	2006	1303
Deliveries, November.....	3222	2345	2485	1366	923
Stocks, November 30.....	140	800	395	640	380
ENGLAND.					
World's visible supply, November 30.....Tons			2796	2772	2334
Para receipts, July 1 to November 30.....			10015	10845	10610
Para receipts of Caucho, same dates.....			1075	1110	770
Afloat from Pará to United States, Nov. 30.....			893	604	443
Afloat from Pará to Europe, Nov. 30.....			988	830	837

Rubber from the Far East.

Exports of plantation rubber from the Straits Settlements and Malay States from January 1 to October 31, inclusive (in pounds), were destined as follows:

Great Britain.....	1,204,534	Australia.....	21,581
Europe.....	133,200	Ceylon.....	183,556
United States.....	4,134		
Japan.....	13,050	Total.....	1,530,064

[From Singapore, 1,134,996 pounds; from Penang, 395,068.]

Total exports from the above region for the last two completed years were:

	1905.	1906.
From Singapore.....	180,533	719,135
From Penang.....	48,267	98,636
Total.....	228,800	817,771

Exports of plantation rubber from Ceylon from January 1 to October 28 were officially stated on that date as follows:

Great Britain.....	250,116	India.....	112
Belgium.....	3,387	Australia.....	8,565
France.....	1,234	United States.....	123,595
Germany.....	14,675		
Holland.....	151	Total.....	401,835

[This total was later corrected to 394,643 pounds, by subtracting rubber not actually the produce of Ceylon.]

Complete exports of Ceylon plantation rubber in former years: 41,684 pounds in 1903; 72,040 pounds in 1904; 168,247 pounds in 1905; 327,024 pounds in 1906.

A later report from Ceylon shows exports of 432,638 pounds to November 21.

Should the shipments for the remainder of 1907 have continued at the same rate as above, the Straits will show a total of 1,836,077 pounds and Ceylon 489,060, or a total of 2,325,137 pounds, against 1,144,795 pounds in 1906.

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

NOVEMBER 25.—By the steamer *Dominie*, from Manaus and Para:

IMPORTER.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	109,700	87,900	77,600	.....	365,200
New York Commercial Co.....	106,300	51,900	50,000	25,300	293,500
A. T. Morse & Co.....	102,600	30,000	65,200	800	204,600
General Rubber Co.....	92,400	16,900	58,400	8,100	175,800
C. P. dos Santos.....	11,400	5,000	20,500	1,300	38,200
Hagemeyer & Brunn.....	6,400	.....	700	.....	7,100

Total 638,800 197,700 272,400 35,500 1,144,400

DECEMBER 3.—By the steamer *Obidense*, from Manaus and Para:

A. T. Morse & Co.....	254,000	18,200	98,000	200	402,200
Poel & Arnold.....	110,900	29,400	51,100	300	191,700
New York Commercial.....	82,500	8,000	50,300	.....	140,800
General Rubber Co.....	85,000	12,800	38,400	.....	136,200
G. Amsinck & Co.....	14,500	7,500	2,000	.....	24,000
C. P. dos Santos.....	.....	.....	35,000	.....	35,000
Edmund Reeks & Co.....	.....	.....	4,600	.....	4,600

Total 547,800 106,800 281,200 500 936,300

DECEMBER 14 By the steamer *Mar* from Man and Para:

A. T. Morse & Co.....	311,000	49,700	59,600	2,000	422,300
Poel & Arnold.....	150,800	11,800	52,600	19,500	234,700
General Rubber Co.....	71,000	14,700	49,600	1,000	136,300
New York Commercial Co.....	57,500	11,100	8,800	.....	77,400
C. P. dos Santos.....	18,900	1,100	9,200	.....	29,200
G. Amsinck & Co.....	7,700	1,000	400	.....	9,100
Edmund Reeks & Co.....	5,500	.....	.....	.....	5,500

Total 624,200 90,900 169,800 21,500 946,400

DECEMBER 24 By the steamer *P. O. C.* from Man and Para:

A. T. Morse & Co.....	65,500	12,000	51,100	.....	128,600
C. P. dos Santos.....	7,600	1,100	2,300	.....	11,000
General Rubber Co.....	54,400	11,700	7,100	.....	73,200
New York Commercial Co.....	37,000	8,600	16,700	300	53,200
Poel & Arnold.....	57,000	11,300	74,000	.....	142,300
Hagemeyer & Brunn.....	14,700	.....	.....	.....	14,700

Total 248,200 65,900 172,900 300 487,100

PARA RUBBER VIA EUROPE.

Nov. 23.—By the *Mauretania*—Liverpool:

A. T. Morse & Co. (Coarse)..... 9,000

Nov. 23.—By the *Savone*—Havre:

A. T. Morse & Co. (Cauchy)..... 35,000

DEC. 2.—By the *Lincoln*—Hamburg:

General Rubber Co. (Fine)..... 14,500

DEC. 2.—By the *Hudson*—Havre:

A. T. Morse & Co. (Coarse)..... 11,500

DEC. 6.—By the *Lusitania*—Liverpool:

New York Commercial Co. (Fine)..... 11,500

A. T. Morse & Co. (Fine)..... 5,500

W. L. Gough & Co. (Coarse)..... 2,500

DEC. 11.—By the *Chile*—Mollendo:

New York Commercial Co. (Fine)..... 7,000

W. R. Grace & Co. (Cauchy)..... 9,000

DEC. 12.—By the *Ucayali*—Iquitos:

Edmund Reeks & Co. (Fine)..... 14,000

Edmund Reeks & Co. (Coarse)..... 6,000

DEC. 16.—By the *Lucania*—Liverpool:

Poel & Arnold (Fine)..... 22,500

DEC. 16.—By the *Pennsylvania*—Hamburg:

General Rubber Co. (Coarse)..... 7,000

DEC. 21.—By the *Baltic*—Liverpool:

Poel & Arnold (Fine)..... 15,000

W. L. Gough Co. (Coarse)..... 4,500

OTHER NEW YORK ARRIVALS.

CENTRALS.

Nov. 23.—By the *Monterey*—Frontera:

E. Steiger & Co..... 5,000

Harburger & Stack..... 2,000

A. Norden & Co..... 1,500

E. N. Tibbals Co..... 500

H. Marquardt & Co..... 500

Nov. 25.—By the *Adriatic*—Colon:

Hirzel, Feltman & Co..... 20,000

Roldau & Van Sickle..... 4,000

Dumarest Bros. Co..... 3,000

A. Santos & Co..... 3,000

L. Johnson & Co..... 2,000

Laurence & Turnure..... 1,500

Andreas & Co..... 1,500

G. Amsinck & Co..... 1,500

Nov. 25.—By the *Tenison*—Bahia:

Poel & Arnold..... 22,500

General Rubber Co..... 7,000

Nov. 27.—By the *Cunifagoes*—Tampico:

New York Commercial Co..... *45,000

Edward Maurer..... *35,000

Poel & Arnold..... *25,000

Eurocean account..... *45,000

Nov. 29.—By the *Siberia*—Columbian ports:

G. Amsinck & Co..... 7,000

Schulte & Goshen..... 3,000

H. W. Peabody & Co..... 1,500

Escobar & Gorgorza..... 1,000

Isaac Brandon & Bros..... 1,000

Nov. 30.—By the *Panama*—Colon:

G. Amsinck & Co..... 10,000

Piza, Nephews Co..... 3,000

Henry Mann & Co..... 2,000

Isaac Brandon & Bros..... 1,500

Eggers & Heinlein..... 1,000

DEC. 3.—By the *Venetia*—Colon:

Hirzel, Feltman & Co..... 3,500

Schulte & Goshen..... 3,000

Kunhardt & Co..... 500

DEC. 4.—By the *El Sud*—New Orleans:

A. T. Morse & Co..... 3,500

A. N. Rotholz..... 1,500

Eggers & Heinlein..... 1,000

DEC. 5.—By the *Dunottar*—Colon:

G. Amsinck & Co..... 3,500

Isaac Brandon & Bros..... 2,000

American Trading Co..... 1,500

Aramburu Incorporated..... 1,500

DEC. 7.—By the *Morro Castle*—Frontera:

H. Marquardt & Co..... 3,500

Harburger & Stack..... 2,500

American Trading Co..... 1,500

E. Steiger & Co..... 500

DEC. 9.—By the *Zulia*—Maracaibo:

R. de Gallego Co..... 2,500

Suzarte & Whitney..... 1,500

DEC. 9.—By the *Washington*—Tampico:

Edward Maurer..... *45,000

Continental Mexican Rubber Co..... *25,000

New York Commercial Co..... *14,000

F. A. Knoll..... *14,500

DEC. 11.—By the *Florida*—Colon:

G. Amsinck & Co..... 24,000

Dumarest Bros. Co..... 6,000

Hirzel, Feltman & Co..... 5,000

Roldau & Van Sickle..... 2,500

W. R. Grace & Co..... 2,000

Meeker & Co..... 2,000

A. Rosenthal S. S..... 1,000

Aramburu Incorporated..... 1,000

DEC. 13.—By the *Antilles*—New Orleans:

Eggers & Heinlein..... 2,500

Manhattan Rubber Mfg. Co..... 1,000

H. W. Peabody & Co..... 1,000

DEC. 13.—By the *Florida*—Columbia ports:

G. Amsinck & Co..... 4,500

Schulte & Goshen..... 1,500

M. Blanco..... 1,000

A. Held..... 1,000

Kunhardt & Co..... 500

Pedro A. Lopez..... 500

DEC. 14.—By the *Mexico*—Frontera:

Harburger & Stack..... 7,500

E. Steiger & Co..... 1,000

H. Marquardt & Co..... 2,500

DEC. 14.—By the *Sanchez*—Tampico:

Edward Maurer..... *125,000

New York Commercial Co..... *55,000

DEC. 16.—By the *Cunib*—Honduras:

Eggers & Heinlein..... 5,500

H. W. Peabody & Co..... 1,000

Bartling & De Leon..... 1,000

DEC. 16.—By the *Altus*—Colon:

West Coast Rubber Co..... 2,000

G. Amsinck & Co..... 2,000

Suzarte & Whitney..... 500

DEC. 16.—By the *Tintoretto*—Bahia:

A. Hirsch & Co..... 11,500

J. H. Rosback & Bros..... 2,500

DEC. 21.—By the *El Paso*—Galveston:

Continental Mexican Rubber Co..... 45,000

Edward Maurer..... 25,000

E. Steiger & Co..... 9,000

*This sign, in connection with imports of Cen-

trals, denotes Guayule rubber.

AFRICANS.

Nov. 23.—By the *Patricia*—Hamburg:

Rubber Trading Co..... 9,000

General Rubber Co..... 4,500

Nov. 25.—By the *Victoria*—Hamburg:

A. T. Morse & Co..... 22,500

Nov. 26.—By the *Merion*—Antwerp:

A. T. Morse & Co..... 90,000

Robinson & Stiles..... 6,500

Joseph Cantor..... 4,500

Raw Products Co..... 3,500

DEC. 2.—By the *Cedric*—Liverpool:

Poel & Arnold..... 22,500

Raw Products Co..... 4,500

DEC. 2.—By the *Lincoln*—Hamburg:

General Rubber Co..... 9,000

DEC. 2.—By the *Carmania*—Liverpool:

A. T. Morse & Co..... 7,000

DEC. 5.—By the *Cedric*—Liverpool:

General Rubber Co..... 125,000

A. T. Morse & Co..... 4,500

DEC. 9.—By the *Amerika*—Hamburg:

General Rubber Co..... 11,500

DEC. 9.—By the *Lusitania*—Liverpool:

Poel & Arnold..... 5,500

DEC. 9.—By the *Touraine*—Havre:

Robinson & Stiles..... 5,500

DEC. 10.—By the *Erika*—Lisbon:

General Rubber Co..... 67,000

DEC. 13.—By the *Samland*—Antwerp:

Joseph Cantor..... 6,000

DEC. 16.—By the *Arabic*—Liverpool:

A. T. Morse & Co..... 11,500

DEC. 16.—By the *Pennsylvania*—Hamburg:

A. T. Morse & Co..... 11,500

W. L. Gough Co..... 23,000

DEC. 16.—By the *Lucania*—Liverpool:

George A. Alden & Co..... 25,000

Poel & Arnold..... 11,500

General Rubber Co..... 5,500

DEC. 16.—By the *Hudson*—Havre:

Livesey & Co..... 11,500

DEC. 21.—By the *Florida*—Havre:

Poel & Arnold..... 22,500

DEC. 21.—By the *Florida*—Liverpool:

Poel & Arnold..... 7,000

A. T. Morse & Co..... 6,000

George A. Alden & Co..... 4,500

EAST INDIAN.

Nov. 23.—By the *Monterey*—London:

A. T. Morse & Co..... 7,500

George A. Alden & Co..... 2,000

General Rubber Co..... *1,000 *10,000

DEC. 2.—By the *Utrah*—London:

General Rubber Co..... *4,500

Poel & Arnold..... *1,000 *5,500

DEC. 2.—By the *Hudson*—Singapore:

Poel & Arnold..... 22,500

DEC. 3.—By the *Deutchenda*—Colon:

A. T. Morse & Co..... *20,000

DEC. 7.—By the *Ghazee*—Singapore:

George A. Alden & Co..... 25,000

Poel & Arnold..... 15,000

H. Pauli & Co..... 5,500

Raw Products Co..... 5,000

M. Joachimson..... 5,000

W. L. Gough & Co..... 4,500

DEC. 9.—By the *Philadelphia*—London:

A. T. Morse & Co..... *3,500

General Rubber Co..... *3,500

*Denotes Plantation Rubber.

GUTTA-JELUTONG.

DEC. 2.—By the *Hudson*—Singapore:

M. Joachimson..... 265,000

George A. Alden & Co..... 210,000

Heabler & Co..... 155,000

W. L. Gough Co..... 100,000

J. W. Phyfe & Co..... 55,000

DEC. 7.—By the *Ghazee*—Singapore:

Heabler & Co..... 425,000

M. Joachimson..... 315,000

L. C. Hopkins Co..... 225,000

George A. Alden & Co..... 95,000

W. L. Gough Co..... 70,000

GUTTA-PERCHA.

Nov. 25.—By the *Victoria*—Hamburg:



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Liverpool:

EDMUND SCHLUTER & Co. report [November 30]:

The history of rubber knows of no decline to compare with one of the present year, which commenced with quotations of 5s. 2½d. for hard fine and 4s. 1d. for cauchio ball. When prices fell to 4s. 5d. and 3s. 5d. during the summer the trade did not expect the subsequent rise to 4s. 10½d., but there was certainly no belief in a decline to 4s., or less. It must therefore be assumed as certain that the decline during October-November was due chiefly to the disturbance in the money market and the severe curtailment of credits. Even so it would probably not have gone so far if the trade had not now made up its mind to expect general retrenchment in business during 1908. With no crop shortage in Brazil and elsewhere it would in these circumstances be easily possible that demand should fall short of supplies, and thus the decline be resumed or at any rate the lower range of prices become permanent.

In the meantime fluctuations after so severe a fall as we have had are more than probable. A further element of uncertainty remains—the American demand which is so largely influenced by weather conditions in the United States during the next few months.

THE WORLD'S VISIBLE SUPPLY OF PARA, NOVEMBER 30.

	1907.	1906.	1905.	1904.	1903.	1902.
Tons.....	3008	3116	2738	2224	2900	3167
Prices, hard fine.....	3/6	5/2	5/3	5/5½	4/-	3/4½

LIVERPOOL STOCKS OF AFRICAN RUBBER, NOVEMBER 30.

1907.....	282	1904.....	443	1901.....	648
1906.....	328	1903.....	108	1900.....	802
1905.....	307	1902.....	473	1899.....	533

Rubber Receipts at Manaos.

DURING October and four months of the crop season (including cauchio), reported by J. H. Andresen, Sucrs.

	—OCTOBER.—			—JULY-OCTOBER.—		
From—	1907.	1906.	1905.	1907.	1906.	1905.
Rio Purus	1073	506	704	2504	1702	2041
Rio Jurua	204	249	319	544	592	668
Rio Madeira	225	273	214	1080	1237	1010
Rio Solimoes	535	321	317	1222	887	775
Rio Negro	2	8	6	4	15	10
From Iquitos	249	275	293	514	645	768
Total	2288	1722	1853	5808	5078	5302

Antwerp.

	1907.	1906.	1905.	1904.	1903.
DETAILS.					
Stocks, Oct. 31.....kilos	723,816	621,081	554,483	710,860	876,637
Arrivals in November.....	532,012	373,370	624,385	336,701	361,895
Congo sorts.....	490,441	311,315	462,907	207,778	303,453
Other sorts.....	33,171	62,055	161,478	68,923	58,442
Aggregating.....	1,250,428	994,451	1,178,868	1,047,561	1,238,532
Sales in November.....	241,149	279,532	543,572	435,835	558,390
Stocks, November 30.....	1,015,282	714,919	635,296	611,726	680,142
Arrivals since Jan. 1.....	4,834,029	5,135,602	5,239,553	5,182,012	5,088,325
Congo sorts.....	4,156,141	4,014,059	4,006,293	4,263,232	4,580,456
Other sorts.....	678,788	1,121,543	1,233,350	918,780	507,869
Sales since Jan. 1.....	4,477,831	5,155,870	5,145,618	5,181,186	5,066,288

Plantation Rubber.

	1907.	1906.
STATISTICS OF PRODUCTION.		
Selangor Rubber Co.:		
January-June, inclusive.....pounds	47,303	
January-September, inclusive.....	83,239	47,776
Blackwater Estate (Klang):		
January-June, inclusive.....	10,167	
Shelford Rubber Estate:		
January-July, inclusive (about).....	5,525	2,939
Perak Rubber Plantations:		
April-September, inclusive.....	12,750	7,120
Federated Malay States Rubber:		
Year ended May 31.....	32,175	13,222½
Kepitigalla Rubber Estates:		
April-October, inclusive.....	21,785	13,341
Lallambrosa Rubber Co.:		
November.....	19,890	15,062
April-November, inclusive.....	144,584	84,392

THE wearing of shoes is not universal among the natives of the mountain districts of India, but some rubber shoes find their way there. The United States consul general at Calcutta reports: "The rubber shoes with cloth top made in Austria were fairly well made and cheap for the price; but the whole stock was crude and cheap, not only in price but in quality. The average native is too poor to buy anything but the very cheapest; hence the bulk of the native dealer's stock is made up of shoes that the American laborer would not look at except through curiosity."

At the fourth annual meeting of the British Vacuum Cleaner Co., Limited (London, November 11), it was reported that the year's profits would permit the payment of 5 per cent. dividend. Last year there was no disbursement, and the year before a dividend of 6 per cent. The company's business in the London district is reported to be increasing, and the condition of the company to be sound, but the various subsidiary companies throughout the United Kingdom have yielded smaller returns than at some times in the past.

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Vol. XXXVII. No. 5.

FEBRUARY 1, 1908.

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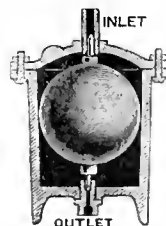
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NEW YORK'S POOR FIRE HOSE.

THE pride which all good New Yorkers feel in their fire department, with its brave and vigilant uniformed force and its liberal equipment of fire apparatus—the heavy cost of which the public pays gladly—has received a severe wound through recent revelations regarding the character of much of the fire hose in use and the conditions under which it has been supplied. On the theory that no chain is stronger than its weakest link, no fire department is really well equipped without the best hose than can be bought, and the failure to supply such hose endangers not only the property exposed to ravages of fire, but also—and this is a vastly more serious matter—the lives of the firemen, not to mention the occupants of buildings in flames.

The mayor of New York has ordered a drastic investigation into the quality of the fire hose in use in the city, the alleged insufficiency of the supply, and the conditions under which the hose has been bought. Reports which compel attention are to the effect that many engine houses are without a normal equipment of hose in quantity, and that the quality of much of it is so poor that the department authorities are afraid to make the periodical tests required by the rules lest it fail to stand them. The city's hose inventory still includes lengths put into service 18 years ago, but the record of hose burst at fires

OUR NEW LOCATION.

THE offices of THE INDIA RUBBER WORLD have been removed to No. 395 Broadway, at Walker street, where larger and better quarters than those occupied hitherto have been secured. The members of the rubber trade and any other friends are always welcome at the new location, the same as at the old place. Please remember that the address is now No. 395 Broadway.

makes a worse showing for lots recently purchased than for older lots.

What has led to the activity of the mayor in the matter, the first instance of the kind in the history of the mayor's office? Not the watchfulness or the interest in the matter of any city official, either in or outside the fire department, although the charges made, if true now, have been true for years. We have just been looking over several annual reports of the fire department, including the latest, and in these volumes of over 300 pages each we find scarcely a single mention of fire hose, and these do not refer to the subjects which now are to be investigated by the mayor's order. That is to say, the city's chief executive, if he has depended upon his subordinates for information, has had no reason to suspect that the hose supply is not of the highest efficiency.

It has remained for the fire underwriters to send experts into every fire house in the city and study the hose question in detail, the result of which has not been published widely. And the Merchants' Association, following the disastrous Parker building fire, has supplemented the demand of the insurance people for vigorous official action. Doubtless we shall see many public servants each trying to place the blame on some one else, but the first and most essential thing to be done is to buy more hose and good hose, and create a system under which no other kind can be bought for the city in the future.

The position in this matter of the fire hose manufacturers calls for a word of comment. The city does not go to a rubber manufacturer and buy hose; it draws up specifications which it insists shall be followed by the manufacturers. The result is that many manufacturers, it is said, refuse longer to bid on those specifications, not being willing to guarantee hose made according to them. In other words, the city becomes responsible for the quality of the hose it buys, and not the manufacturers, who have no voice in the quality of the goods supplied.

New York is about putting into use a new high pressure water service, which will call for stronger hose than has yet been ordered, which opens new problems in fire hose construction. But whether for the regular equipment or for the new service, it occurs to us that experts in the manufacture should have a voice in the drawing of the specifications and not the fire department officials alone, no matter how capable these may be.

Prominence is given here to this subject in the belief that the considerations involved may apply in some degree to many cities other than New York.

FEB 3 - 1908

PRICES OF RUBBER AND THE DEMAND.

THERE have been some expressions of surprise, in rubber planting circles, that the decline in the selling price of rubber during several months past has not already led to a largely increased demand for the material. This was due to the idea that, with lower prices than have prevailed of late years, rubber might become available for new uses from which it has been barred by its high cost. Such increased demand would presumably check the decline lately started and perhaps give the market an upward turn.

Speaking generally, this theory has a basis in reason, and no doubt many manufacturers could mention lines of rubber goods the sale of which might be largely increased if they were produced at prices lower than what are now regarded as standard. But every important new departure in the industry requires time for development. In the matter of rubber tiling, for example, which has been referred to as a line which might come into much wider use with lower priced rubber available, manufacturers would have to be better assured than they now are that rubber is to remain on the present basis of cost, and possible new consumers would require a similar assurance before buying freely. But the mere fact that rubber sells for less to-day than one year ago has no bearing upon what it may cost six months hence. A continuation of the present price level, however, for two or three years, might justify the belief that the era of "dollar rubber" was at an end, and gradually the trade could adjust itself to the condition of cheap supplies.

It should be understood that the demand for rubber is not automatically controlled by fluctuations day by day in the market for crude. Nor do prices of rubber goods follow closely the rise and fall of prices of raw material. There is reason to believe that a large proportion of the raw rubber now going into use was bought at a much higher figure than current quotations. Manufacturers, in fact, appear on the whole to be so well stocked that the lowest recent prices do not encourage them to buy. But rubber bought at to-day's prices will not reach the consumer, on an average, short of several months to come, and not until then could the manufacturer offer better discounts than now. Those factories which turn out goods for store doubtless have in hand now stocks made of crude rubber bought at the highest price of the past year.

But for the encouragement of the rubber planter it may be suggested that when people really want rubber goods high prices do not deter them from buying. At no time in the history of the industry has the consumption of rubber been so great as in the past two or three years of unprecedentedly high prices. The new automobile tire industry, in particular, may be mentioned as having been built up under these conditions. It is doubtful whether lower prices for rubber would increase greatly the sale of tires; people who require them will pay what is asked, and other people will hardly buy at any price.

Just now the buying of all goods, including rubber manufactures, is on a reduced scale in many countries, whatever may be the reason, involving a check upon the production of goods, all of which has tended to lower the price, among some other raw materials, of india-rubber. Such conditions have occurred before and may be looked for again, and when a revival of trade comes it is only reasonable to expect that the demand for rubber will more nearly approach the volume of supplies than at present. Should the net result be a long continued low range of prices, we repeat that the ultimate result is likely to be a demand in new directions, with a tendency to advance prices of the raw material.

THE CONDITION OF THE TRADE.

AS having a bearing upon the business situation, it may be mentioned that the exports of crude rubber from Para during 1907 were largely in excess of those for any previous year, and 71 per cent. larger than for 1898. Whether the production of standard grades of rubber from the rest of the world has increased proportionately is doubtful, but there has been an increase. But visible supplies of rubber are not much greater now than ten years ago, which points to a great increase in consumption.

The above figures relate only to grades that have been standard all the while. Meantime there has been a marked increase in the production of pontianak gum, of Mexican guayule, and latterly of plantation rubber, the total of which sorts is very large. Similarly there has been a very great increase, proportionately, in the output of reclaimed rubber, which is now produced of better quality, and has become available for many purposes in the industry in which formerly its use was unknown. That the world should now demand so much more rubber than ten years ago is a most encouraging fact for the trade.

It has been observed that when the use of rubber becomes general for any particular purpose people are not apt to give up that use readily. Whoever becomes accustomed to wearing rubber overshoes continues the habit; the railroads which have adopted airbrakes must continue to buy hose for them; and the number of cities and towns having fire departments adds continually to the general demand for fire hose. No matter what the general business situation, therefore, the demand for rubber goods continues, though it may now and then be less active.

Such considerations as the above help to explain the generally optimistic views held in the rubber trade. The manufacture and sale of goods may be less active now than for some time past, but those large buyers who refrain from placing orders now, for any reason, must place them some time, so that in the end the average rate of consumption will be maintained. It has been said before, of business depressions in America, that the rubber

industry is one of the last to be affected, and among the first to revive, and there is nothing apparent at the present to suggest an exception to this rule.

FIGHTING FIRES IN "SKYSCRAPERS."

THE progress which new America has made in so many lines, as compared with some older countries, is due to the feeling which permeates the whole population that whatever seems desirable can be done, or obtained; it is only a question of going to work and bringing it about, without any regard to precedent. For example, the tall office building, first developed in this country in cities where certain conditions seemed to demand this form of construction, has been put up in the face of every objection it was possible to urge. Not the least of these was that no known system of protection against fire could be applied successfully to twenty-story buildings. "Then we must have new fire-fighting methods" was the concrete expression of American spirit, and every year produces taller buildings than ever before.

Whether progress in fire protection methods has kept pace with the new architectural conditions remains to be proved, but important evidence is likely to be brought out soon in New York, where a new high pressure system, involving the use of standpipes within buildings and powerful stationary engines, has been designed to supplant the portable steam fire engines now so familiar on the streets of every city. These have been described recently as "go carts," and this is what they seem when trying to squirt their feeble little streams of water toward a fire which may be raging a hundred feet or more above their highest limit.

Not all buildings are "skyscrapers" as yet, and the ordinary fire engine—if supplied with good hose—has a long career of usefulness before it. But the new system will call for a new class of rubber equipment, and it will be interesting to watch the progress of hose manufacturers in meeting the requirements of the situation.

CHEAPER "CHEWING RUBBER."

ONE of our esteemed contemporaries across the briny deep has an exceedingly interesting article on "chewing rubber," the "chewing" being an adjective. After explaining that it is very largely used in the United States and to some extent in England, they say that it is an excellent substitute for tobacco, cleans the teeth, and cleanses the breath. It tells how it is made:

"Raw rubber of the best quality; sweet woods in the finest sawdust for lasting purposes; liquorice: an essential oil, depending on the flavor desired; and lastly, a filling to cheapen the article, and consisting mostly of potato meal, or in some cases of magnesia."

The article goes on to say that attempts have been made to use vulcanized instead of raw rubber, but the product is deficient in aroma and has a taste that requires getting used to. At the same time such gum lasts a long time and is gradually getting into favor for that reason only. This information, particularly, will be of intense interest to rubber reclaimers. Chicle

and sawdust are doomed. The next generation are sure to chew regenerated shoes, mats, and hose, "doped" with potato meal and flavored to taste.

LEST WE FORGET.

BUT a few moons ago Pará rubber was so high that the trade did not know which way to turn. The reclaimers and those who produce "assistants" did their best, but with little effect upon the general situation. Just then, however, some enterprising souls put millions of dollars into plants and processes for the extraction of rubber from a hitherto useless desert shrub. They produced on a magnificent scale and the hearts of the manufacturers were gladdened. They got a new and useful rubber and an assured and regular supply. Then came a change. Pará dropped in price, and—so it is said—they forgot their shrub rubber friend, and would have none of it. Yet it is here to stay. To take it out of the market would be calamity. To use it, and to encourage its production against the day when other grades reach their normal level would seem to be good business.

THE RUBBER OUTPUT FROM THE CONGO FREE STATE appears now to have reached about a fixed annual total, the amount for eight years past having not varied widely one year with another. The trade will welcome every feature of the rubber supply that points to stability of demand, as having a bearing upon stable prices. At the same time it is possible that the conditions in the Congo are such as to point to ultimate extinction of the supply, the present output being maintained by the working of new territory every year. A question of more immediate importance to the trade is the keeping up of the quality of the output, about which of late there has been a good deal of complaint.

ELECTRICITY IN MEXICO.

THE electrical development of Mexico is attracting wide attention. The *Electrical World* notes that the Mexican Light and Power Co., a Canadian concern alone have invested more than \$40,000,000 (gold) in the installation of electrical plants at Necaxa and elsewhere in Mexico, for lighting and transmission of power for street railways and industrial purposes. The Necaxa plant is of such importance that the German government has sent a commission of experts to study it. The Juanaquato Light and Power Co. have equipped a large plant at El Dura for supplying light and energy for motors to the neighboring mines. The Compañía Eléctrica e Irrigado are developing a plant in Hidalgo state, to cost \$3,250,000. Tenders have been invited for a plant at Tetepango, to cost \$2,500,000. These are only a few of the new electrical enterprises listed by the *Electrical World*, the operation of which is, or is to be, spread practically all over Mexico, involving no small demand for insulated wires and cables.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha from the United States for the month of November, 1907, and for the first eleven months of five calendar years:

MONTHS.	Belting Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
November, 1907	\$125,812	\$130,705	\$208,535	\$555,052
Jan. to Oct. 1.....	168,648	1,401,890	3,345,209	5,915,747
Total	\$1,204,460	\$1,532,595	\$3,643,744	\$6,470,799
Total, 1906.....	1,083,228	1,137,445	2,993,804	5,214,477
Total, 1905.....	1,060,804	1,182,784	2,622,162	4,871,750
Total, 1904.....	808,771	1,099,030	2,149,273	4,057,074
Total, 1903.....	777,301	890,835	2,276,179	3,944,375

THE EDITOR'S BOOK TABLE.

RECOLLECTIONS OF AN ILL-FATED EXPEDITION TO THE HEAD-waters of the Madeira River in Brazil. By Neville B. Craig, in Cooperation with members of the Madeira and Mamoré Association. Philadelphia and London: J. B. Lippincott Co. 1907. [Cloth. 8vo. Pp. 479 + maps and plates. Price, \$4.]

IT is conceded generally that the richest natural supplies of rubber on the globe are to be found in the South American republic of Bolivia, the product of which to-day ranks highest among the grades marketed as "Pará" rubber. Bolivia, though larger than any country in Europe except Russia, has no seaport and no natural outlet to any sea other than the river Madeira, obstructed by a formidable series of cataracts. The natural resources of South America, on the whole, doubtless are equal to those of North America, and of the southern countries none is richer than Bolivia. In mineral resources none other of the southern republics is so rich. But on account of the landlocked condition of the country it is hardly less remote from the world's commercial capitals than is the planet of Mars.

The possibilities of the commercial development of Bolivia by means of circumventing the cataracts of the Madeira were recognized long ago by Colonel George Earl Church, an American, than whom probably no one has or ever has had a more intimate knowledge of the geography and economic resources of South America. More than a century ago the commercial advantages to a large section from the opening of navigation down the Madeira via the Amazon to the Atlantic had been pointed out, but progress was made slowly in South America in those days, and it remained for Colonel Church to make the first definite attempt to carry out such an attempt, which was begun in 1870, when the National Bolivian Navigation Co. was organized under an act of the United States congress, with Colonel Church as president.

This company was formed to acquire a concession granted by the Bolivian government to Colonel Church to construct a railway around the cataracts of the Madeira. Financial obstacles were the first to be met, and the book before us records the attempts to secure additional capital in England, the prolonged litigation which grew up there in consequence and the ultimate failure of the whole project. But the book gives first place to the personal experiences of the engineers and others who departed from the United States in all good faith to undertake the construction of the Madeira railway, on which not a little work was actually done before the financial crash which gave a finale to the undertaking.

The present book is written by one of the survivors of the Madeira expedition, with the assistance of those of his colleagues who also survive, as an outgrowth of annual reunions which they hold in Philadelphia. It ends with a reference to a revival to Colonel Church's project, in pursuance of the treaty whereby Brazil succeeded in having rescinded the concession granted by Bolivia to Sir Martin Conway and his associates, with the details of which INDIA RUBBER WORLD readers are familiar. If the terms of this treaty are carried out, the rich rubber regions of Bolivia will be brought two months nearer to New York, and the domain of such "rubber kings" as Nicolas Suarez, on the upper Madeira, who was sketched by Mr. Post in THE INDIA RUBBER WORLD [April 1, 1905—page 223], need no longer be regarded as an unknown country to the world at large.

The interest of this book, other than to those who are concerned about the commercial possibilities involved in the opening of Bolivia to communication with the outside world, lies in its graphic descriptions of the rubber region tapped by the Madeira, and the native population, together with the hardships which white men must undergo in seeking to engage in trade there. These hardships enable us to understand the failures of so many companies largely capitalized in England to exploit rubber in the Amazon country. The

record of engineers crazed by tropical fevers and by starvation no doubt is being repeated in the history of the force now engaged, under an American contractor, in carrying out the new Madeira-Mamoré railway project. But when all is finished, as it inevitably will be, it will prove the first step in making Bolivia and the adjacent Brazilian states as habitable for white men as the Mississippi valley is to-day, after centuries of determined effort.

Although this book is put forth as a mere collection of memoranda, with no claim to literary merit, we recall no book relating to the country described that is more readable or more informing.

THE LAND OF TO-MORROW. A NEWSPAPER EXPLORATION UP the Amazon and over the Andes to the California of South America. By J. Orton Kerbey. New York: W. F. Brainerd. 1906. [Cloth. 12mo. Pp. ix + 405. Price, \$1.50.]

MAJOR KERBEY, some time United States consul at Pará, became interested in the sources of rubber, as his frequent contributions at a later period to THE INDIA RUBBER WORLD indicate. It was this that led him to go up the Amazon to its sources and thence to the Pacific. The present volume is a collection of newspaper letters written on a tour undertaken at his own initiative and expense, and this is not intended primarily to interest rubber men.

Major Kerbey, however, is an entertaining writer, being first of all a close and careful observer and one who never loses his interest in rubber, so that his book on nearly every page throws sidelights upon the people of the rubber regions and the conditions of conducting the rubber traffic which one is not likely to find in books written by professional tourists. The volume contains interesting notes on Pará and Manãos and the lesser known centers of the rubber trade in Peru. The title of the book is suggested by the disposition of the people described never to do to-day what can be put off until to-morrow—a disposition which accounts for their lack of what in other countries is called "progress."

THE CEYLON HANDBOOK AND DIRECTORY AND COMPENDIUM of Useful Information for 1907-08. To Which is Prefixed a Statistical Summary for the Colony and Review of the Planting Enterprise, up to August, 1907. Compiled and Edited by the Staff of the Ceylon Observer, under the Direction of J. Ferguson, c. m. c. Colombo: A. M. & J. Ferguson. 1907. [Cloth. 8vo. Pp. xli + 1456. Price, £1.]

This yearly publication, established in 1863, has grown steadily in extent and completeness until the present volume forms perhaps the best work of its kind ever produced in any country. There is scarcely any head under which information might be derived concerning Ceylon which is not covered in the volume under review. The editor regards the rubber planting industry as the most interesting branch dealt with in the returns in the present volume, the information given relating to every estate in Ceylon on which rubber has been planted. There is a complete directory of planting companies, extent of planting, names and addresses of planters and much other data of interest. This year, for the first time, the Handbook includes also information regarding rubber estates in Malaya.

KOLONIAL HANDELS-ADRESSBUCH. 1908 (12 JAHRGANG). MIT der Karte der Kolonien. Berlin: Kolonial-Wirtschaftlichen Komitee. 1908. [Paper. Large 8vo. Pp. 299. Price, 2.50 marks.]

An admirable yearly work of reference for whoever is interested in trade in the German colonies from any point of view. The work likewise contains a directory of companies having headquarters in Germany and engaged in trade in other countries than the German colonies—in China, Abyssinia, all over South America, Central America, Palestine, and so on.

IN CURRENT PERIODICALS.

ARBRE à Caoutchouc dit "Nong-giot," dans le cercle de Cao-Bang (Tonkin). Une Nouvelle Liane à Caoutchouc du genre *Boussignia*. By Ph. Eberhart.—*Bulletin Economique*, Hanoi. X-66 (Aug. '06). Pp. 703-708. Anzapfungsversuche an Kautschukbäumen im Nördlichen Küstengebiet Kameruns. [Results of tapping *Ficus*, *Kickxia* and *Hevea*.] By Professor A. Weberbauer.—*Der Tropenpflanzer*, Berlin. XI-12 (Dec. '07). Pp. 823-842. Neue Manihot-Arten und ihre Bedeutung. [Newly described species of "manicoba" rubber trees.]—*Der Tropenpflanzer*, Berlin. XI-12 (Dec. '07). Pp. 861-869.

The Quality of New York City's Fire Hose.

THE extent of the supplies of fire hose at the command of the New York city fire department, and the condition of the hose, have received no little attention of late from the New York Board of Fire Underwriters, which has communicated on the subject with the city authorities. The underwriters do not hesitate to assert that the supply is deficient and the quality of much of the hose very poor, and some remedial action by the city is demanded.

A special investigation, extending to the hose in every engine house in the city and the fire department repair shop, was made by the engineers of the National Board of Fire Underwriters, the results of which are detailed in a report signed by Henry W. Eaton, chairman of the committee on water supply and fire department of the New York board of underwriters, with accompanying papers, which have been placed before Francis J. Lantry, commissioner of the fire department, with the request that they be transmitted to the mayor.

THE SHORTAGE OF HOSE.

At the end of November, 1907, according to the reports under review, many of the companies were equipped with an insufficient amount of hose. The deficit in the boroughs of Manhattan and the Bronx was estimated at 40,150 feet—548 lengths of 2½ inch, 192 of 3 inch, and 63 of 3½ inch hose—which amount was likely to be increased before new supplies could be obtained. To supply this deficiency, however, 35,000 feet of 2½ inch hose had been ordered, for delivery in February, to be distributed over the five boroughs of the city. No other sizes had been ordered, except for the fire boats. The new hose is to be paid for out of the city's 1908 appropriation. No hose was paid for out of the 1907 appropriation, though some hose was delivered to the city during the last year which was ordered before the beginning of the year and paid for out of the 1906 appropriation.

POOR QUALITY ALLEGED.

The remarks on the condition of the hose are prefaced by the remark:

"Testing of the hose under pressure [by the underwriters' engineers] was not permitted, as the department officials were apprehensive lest a large amount would burst when subjected to a suitable testing pressure, nor has the department made its regular yearly test (at 180 pounds pressure) for the past two years for the same reason."

It is stated in the report that hose for the New York fire department is purchased by competitive bidding from the different manufacturers, the successful bidders being required to give bonds to fulfill certain guarantees. Specifications for the purchase of fire hose were first adopted in 1902, and previous to 1905 they agreed closely with the makers' standard practice. In 1905 new specifications were adopted by the fire department, containing many variations from those previously in use, and various changes have been made since that time, so that the present specifications differ materially from the standard practice of the manufacturers; indeed to such an extent that while the department's specifications call for a lining of a superior quality of rubber, the hose is not so durable as that regularly made by some manufacturers.

The result of this situation, the report says, is that the few manufacturers who tender for fire hose for New York under present conditions give the three year guarantee required unwillingly, although they stand ready to guarantee their regular brands made under their own specifications for five years. New York specifications for rubber hose are worded in a general manner, those for cotton rubber lined hose are so worded as to allow only certain manufacturers to bid on a given specification.

It is asserted that hose of all kinds purchased under the later specifications is giving unsatisfactory service, much of it bursting before the three year guarantee expires, and at a much lower pressure than is guaranteed by the maker. Of 1,837 lengths of 2½ inch on hand January 1, 1907, purchased in 1904, 1905, and 1906, 351 lengths, or 19 per cent., burst during 1907, while of 1,507 lengths purchased between 1893 and 1902, only 281 lengths, or 17½ per cent., burst, although the latter was older hose and had already done hard service.

In 40 large fires in the boroughs of Manhattan and the Bronx, from January to November inclusive, 1907, no less than 460 lengths of hose, or 23,000 feet, burst and were rendered useless. At 22 of these fires hose was burst in excess of 10 lengths each. "More important still," says the report, "is the fact that in quite a large number of cases hose burst at a pressure of not exceeding 200 pounds, and even in some instances at as low a pressure as 60 pounds!"

Reference is made to the fact that 75,300 feet of hose owned by the New York department has been in use for over seven years, and, while this fact in itself is not a condemnation, the engineers cannot feel but that great risk is run by the city in continuing to use hose which in the nature of things is subject to deterioration from age and use. It is recommended that all such hose ought to be put to suitable test without delay.

THE UNDERWRITERS' SUGGESTIONS.

Based upon the facts elicited by the investigation referred to in these reports, certain recommendations have emanated from the office of the National Board of Fire Underwriters, which are printed here in full as follows:

NATIONAL BOARD OF FIRE UNDERWRITERS.

New York, December 20, 1907.

GEORGE W. HOLT, Esq., Chairman Committee on Fire Prevention New York City:

DEAR SIR: In conformity with a resolution adopted at the meeting of the committee on fire prevention, held on the 19th instant, a number of recommendations are submitted herewith supplemental to report on the condition of hose in the New York fire department.

This, you will recall, is done at the special request of Mr. George W. Babb, as president of the New York Board of Fire Underwriters, in order that the subject of bringing about improvements may be brought to the attention of the proper city authorities.

These recommendations apply to conditions in the boroughs of Manhattan and the Bronx only, and are as follows:

1. That the department purchase (in addition to amount recently ordered) 20,000 feet of 2½-inch, 20,000 feet of 3-inch and 5,000 feet of 3½-inch hose, to be distributed in Manhattan, especially below Fifty-ninth street; this hose to be delivered at the earliest possible date.
2. That this hose be purchased under a 300-pound, four year guarantee, with specifications worded in a general way so as to permit makers of either rubber hose or cotton, rubber lined hose to bid.
3. That rubber lining be of not less than 3 calenders and not less than 1-16 inch thick, no maximum limits being set.
4. That every section purchased be subjected to a pressure of 200 pounds per square inch at the factory, in the presence of a representative of the New York fire department.
5. That on delivery one length in each lot of 5, taken at random, be subjected to the guaranteed pressure of 300 pounds, any failure to be cause of rejecting entire lot of five lengths.
6. That the stretching test for rubber lining be from 2 inches to 10 inches (instead of 12 inches), with a permanent set of 1½ inch.

7. That specifications for weight and strength of cotton duck and for yarn used in cotton covers be abolished, as this is covered by the four-year guarantee.

8. That no bid be considered unless from a manufacturer or dealer in fire hose.

9. That in cases where agents (not direct representatives of hose manufacturers) file a bid they must specify the brand of hose to be supplied and the bid must be accompanied by the manufacturer's guarantee.

10. That any bid may be rejected in whole or in part.

11. That upon a delivery of the above mentioned hose the department shall test all hose on hand, over one year old, to a pressure of 200 pounds per square inch, until all has been tested or until an amount equal to that delivered has been bursted; in which case the department shall purchase as speedily as possible a further lot of hose to replace that burst and upon its delivery continue the testing until hose has been tested throughout the boroughs of Manhattan and the Bronx.

12. That prompt measures be taken to enforce the fulfillment of the guarantees on hose purchased during the last three years; this applies especially to the —, —, and — brands.*

13. That bids be immediately advertised for at least eight hose wagons as designed by the fire department, to be used in connection with the high pressure fire service.

14. That a supply of three-inch hose be purchased, about 30,000 feet, to equip the high pressure hose wagons. This hose should be purchased under similar liberal specifications as the other department hose, but should be guaranteed to stand 400 pounds pressure, every length should be tested to 300 pounds, and every fifth length to 400 pounds. This also should be delivered as early as possible. Respectfully submitted,

W. E. MALLILIEU,
Assistant to General Agent.

John H. O'Brien, formerly fire commissioner of New York for a short period and now holding another position in the city government, has issued a statement bearing upon the system of new and larger water mains ordered at a heavy cost and now nearing completion, in which connection he says: "Unless the fire department is equipped with hose capable of standing hydrant pressure of 300 pounds, efficiency of the high pressure system probably will be nullified. The city ought to vote \$500,000 for hose to insure the success of the new fire protection service, which is costing \$3,500,000."

BURNING OF THE PARKER BUILDING.

The importance of the fire hose question has been emphasized, since the appearance of the reports just referred to, by the burning of the twelve story Parker building, at Fourth avenue and Nineteenth street, New York, on the night of January 10. Although the fire engines were promptly on the scene and the firemen exerted themselves to the utmost, the building was left a ruin and the contents totally destroyed. The amount of the loss is as yet unknown, but the insurance reported on the building and by fourteen tenants amounted to more than \$2,000,000. The fire commissioner complained strongly of the bad condition of the hose in use, but from a study of the newspaper reports it would appear that a lack of pressure which prevented streams of water from being thrown above the sixth story of the building had more to do with the failure of the firemen to subdue the flames. The fire, it may be added, broke out on the fifth or sixth story and ascended to the roof, after which its work was continued until everything was destroyed down to the cellar. Doubtless it will be found that a change of existing methods for fire protection in the case of very tall buildings will be found equally important with the improvement of the present standard of quality of fire hose and increase of water pressure in the districts in

which the high buildings abound. It may be added that the firemen prevented a spread of the flames to any of the adjoining buildings, but these were all low in comparison with the Parker building and capable of being covered by streams thrown by the fire engines under the low pressure obtainable in that part of the city.

It is definitely stated that at this fire 25 fire engines were in action, supplied with 585 lengths of hose, of which 41 lengths—or nearly 7 per cent.—burst.

NEW YORK MERCHANTS TAKE ACTION.

Following the action of the fire underwriters, and influenced to an extent by that action and also by the revelations in relation to hose brought out by the Parker building fire, on January 10, the Merchants' Association of New York has made a formal demand upon Mayor McClellan for a further investigation. The letter of the Merchants' Association calls for an examination of "all the circumstances attending the recent changes of specifications for hose, the effect of such changes upon competition by leading manufacturers, the conditions attending the letting of contracts made since the change of specifications, the business connections and standing of the contractors, the quality of the hose delivered, and the steps taken by the fire department to enforce the hose guarantee intended for the city's protection."

THE OLD SCANNELL SCANDAL.

In the New York courts on June 28, 1901, John J. Scannell, then fire commissioner, was indicted on charges affecting the methods of purchasing fire hose for the city, and further on a charge of conspiracy, with one William L. Marks, described as "agent," for conspiring to defraud the city in purchasing fire hose. [See THE INDIA RUBBER WORLD, August 1, 1901—page 336.] It was asserted at the time that no fire hose could be sold to the city except through this "agent," and the inference was that a commission had to be paid to him which he in turn divided with the authorities. While much was printed in the newspapers in regard to the matter at the time, the consideration of the case in the courts was repeatedly postponed, and although a second indictment was obtained by the district attorney, the accused were never brought to trial, and the merits of the case, if there were any, never became public. Since the time referred to the matter of the purchase of fire hose has not been until now a matter of general interest.

Public sentiment was not aroused by the Scannell case, because no question was raised then with regard to the quality of the hose supplied. Now, however, a different feeling prevails, which is reflected in an editorial in the New York *Sun* (among other newspapers), in which it is asserted: "The water pressure in the mains was inadequate and the fire hose was rotten. In our opinion the individuals who sold the hose and the officials who bought it should be dealt with by the grand jury and, their culpability being ascertained, indicted for manslaughter."

GUAYULE NOTES.

A CONTRACT has been entered into by the Mexican minister of Fomento with Fernando Solis Camara and Ricardo Arteaga for the exploitation for ten years of any guayule plants on national lands in the states of Durango and Zacatecas. The *concessionaires* are bound not to cut shrubs under a certain size, and are to plant new shrubs to replace those cut down. They are to deposit a fund to guarantee the fulfillment of this contract, and pay \$100 a month for a government inspector. The contract was published in the Mexican *Diario Oficial* of November 1.

Experiments in the culture of the guayule rubber plant have been begun on the hacienda "Cedros," in Chihuahua, recently bought by the Continental Rubber Co. The work is in charge of Professor F. E. Lloyd, formerly of Columbia University and interested latterly in desert botanical work in Arizona.

*THE INDIA RUBBER WORLD, in dealing with the fire hose situation in its present shape, does not feel called upon to introduce the names of any manufacturers or their brands of hose.—THE EDITOR.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THE perennial interest attaching to this topic makes unnecessary any apology for further reference to it. Recently in *Chemical News* Messrs. Beadle and Stevens have given the results of further experiments made in the laboratory but approximating closely, in their opinion, to actual working conditions.

STRENGTH OF PLANTATION PARA RUBBER.

The conclusions they arrive at are in favor of the Ceylon and Straits product as compared with fine Pará rubber from Brazil. This will no doubt prove eminently palatable to the planter, but this expression of opinion will have no commercial significance until the conversion of the manufacturers has been effected. So far I am unable to record any progress in this direction. Of course I don't profess to have canvassed the whole trade, but from inquiries among those who have tried the plantation product for widely different purposes I find a remarkable unanimity of opinion as to the deficiency of nerve in the Eastern as against the Brazilian product. It might perhaps be thought that this defect was really only of importance in a few branches, such as cut sheet, for example, but this is by no means the case. One of the strongest denunciations I have heard emanated from the director of an important proofing works in which I am told that plantation rubber, after having had an extended trial, had been altogether banished, for the present at all events. Although rubber is not supposed to figure largely in a proofing compound, it is important that what is there should have a good covering power. This is the property *par excellence* of fine Pará, and for this reason it can be shown that the use of the best rubber is really quite as economical as a mixture of second quality brands for waterproofing purposes—on cost of production alone and quite independent of wearing or lasting properties. As it is not customary in British rubber factories to make accurate determinations of tensile strength, such as carried out by the authors mentioned above, it is unlikely that refutation will come from the trade. It is still less likely that the manufacturers will throw over the fruit of their own experience merely because they are told that they are wrong in their conclusions.

THE new year does not seem to have opened very auspiciously for the rubber scrap collector and dealer. There is a general complaint of the fall in prices and accumulation of stocks and the prevailing tone is one of pessimism rather than optimism. It is hardly necessary to point out that there is much more systematic collection of scrap rubber going on at present than was the case only a few years ago, and that the prices of old rubber articles have advanced as the result of competition among the increased body of collectors. In the case of embedded wire hose, of which large stocks are held in some quarters, it seems somewhat strange that the price has not fallen, seeing that it continues to be barred by the majority of the reclaimers. Apropos of this topic a friend who holds a high scientific position quite unconnected with rubber tells me that he thinks he was the first to make a reclaimed rubber from railway hose, some 25 or 30 years ago. The hose was dissected by army pensioners and the wire sold at Sheffield. The canvas was rotted out with hydrochloric acid, the sediment produced being sold to the Linerusta Walton company at a price sufficient to pay all working expenses. The rubber was then sheeted with the help of unvulcanized waste from card clothing and sold at 1 shilling 6 pence per pound. I doubt if any market could be found nowadays for the rotted canvas deposit and I should say that if much pure card cloth rubber was procurable in these days of glue substitutes it could be sold to better advantage by itself than as a component of recovered vulcanized scrap.

Rubber goods of various kinds are in regular use at Aldershot, especially in the army service corps and royal engineers. Rubber hose pipes are prominent articles and these together with tires and other goods are collected from the various departments and sent to the ordnance stores, whence they are sold periodically by tender on certain dates.

With regard to the present slump in prices of rubber scrap, though it is no doubt due chiefly to the lower price of raw rubber yet in some quarters I find that the plantation rubber is held largely responsible.

Old or used motor and cycle tires come to London from all over England, some of the former being rejuvenated for sale as second hand tires, and others, perhaps the bulk, going to the scrap and reclaiming works. Business is done in large and in quite small lots, old tires being forwarded as freight and cash at current values sent in two days.

I UNDERSTAND that a patent valve emanating from the management of this company is shortly to be put upon the market both in England and America by the Anchor Bush Co., which is concerned with engineering matters. The valve, which is of course made of Dermatine, has metal let into it in such way as to prevent wearing at important points and thus prolonging its life. The patent should interest steam users generally, as in many cases, notably in the marine work, Dermatine valves have of late made great strides, the employment of this material for jointing purposes in the steamer *Lusitania* being a case in point.

Mr. J. F. Cooper (a son of the late Mr. John Cooper, who was for many years general manager of the Dermatine company) is not now connected in any way with the firm, having joined the Motor and General Rubber Co., Limited, of Euston road and Harpenden.

Two prosecutions under this act have to be recorded, both in connection with tires and in both of which, curiously enough, the Dunlop tire company figured. In the first and most important case, heard in London, the Polack Tyre Co. company complained that the Dunlop company bought some Polack tires, removed the letters and marks indicating their German origin, and supplied them to a London motor omnibus company with nothing to intimate that they were not made in Birmingham. The complainants had the magistrate's decision in their favor, but as the Dunlop company have appealed, the case must still be considered *sub judice*. It may be permissible, however, to say that the case has proved a good advertisement for the Polack tires. In the second case the Dunlop company were the complainants and on the ground that Mr. Walter Cheetham, of Hyde, a rubber tire dealer and manufacturer, had sold some tires as being made by the Doughty patent process. It was stated at the local police court that the Doughty patent was of great value to the Dunlop company, a statement which other British manufacturers recognize as far at least as rapidity of output is concerned. The defendant was fined £10 and costs, though it should be said that the offense was attributed to a workman who had acted contrary to instructions in the defendant's absence.

EVERY now and then I make reference to rubber goods which are sold to order for special purposes and do not find a place on ordinary trade lists. One such article which has not had previous reference is the rubber cap for large glass jars and in connection with certain analytical work. These were first made, I believe, by Charles Macintosh & Co. about 30 years ago

DERMATINE CO., LIMITED.

MERCHANDISE MARKS ACT.

RUBBER CAPS. FOR GLASS JARS.

for Dr. Angus Smith, a noted chemist and chief inspector under the Alkali acts. They are 6 or 7 inches in diameter and made of pure spread vulcanized sheet with a deep flange so as to make the jar air tight when in use. Of late years, as made by different firms to the order of individual chemists, they have shown considerable variation in neatness of appearance, principally in the jointing. In the case of some which I examined recently the rubber was quite decayed, to the annoyance of the chemist, but as he had carried out his own desulphurizing in caustic soda I was in no hurry to talk about bad work or the use of inferior rubber by the manufacturer.

ALTHOUGH so far rubber tires have not had any extended use on vehicles under the control of the War Office, the possibilities attaching to them are receiving close attention. The branch of

RUBBER TIRES IN THE BRITISH ARMY.

the service which is concerned with the matter is that of mechanical transport, under a special committee at the

War Office. It is a special branch of the army service corps and at Aldershot there are experimental and repairing shops under the charge of engineers who have the honorary rank of officers in the army service corps. It is the business of these officers to investigate the latest types of mechanical transport, including motor wagons and traction engines. Considerable progress has been made in some directions in substituting mechanical for horse transport, a case in point being the hauling of siege artillery. At present the use of rubber tires is limited practically to ambulances and light motor wagons carrying about 30 hundred-weight, though it may be added that the officers in charge of the department have motor cars provided with their use. The pneumatic tires used on these are under close supervision and every puncture has to be carefully recorded. I hardly feel myself at liberty to use here the details of the information in my possession, especially as there is a formidable document entitled the "Official Secrets Act" to be met with at various points in Aldershot, but there can be no harm in saying that I have heard the Dunlop, Sirdar, and Palmer Cord tires highly spoken of. The Palmer tire was referred to in special terms of praise by an officer who had them on a private car with which he made some long non-stop runs when attending the Scottish Reliability trials. Repairs to tires are carried out at the mechanical transport shops, a Harvey Frost apparatus being installed.

RUBBER INTERESTS IN ENGLAND.

DUNLOP TIRE PROFITS.

THE net trading profit of the Dunlop Pneumatic Tyre Co., Limited, for the year ended September 30, 1907, before deducting directors' fees, debenture interest, etc., amounted to £29,950, but the profit realized from investments was £191,777, making a total, after the deductions noted, of £200,478 5s. 7d. [= \$975,625.57]. The income from investments includes dividends from the Dunlop Rubber Co., Limited [see THE INDIA RUBBER WORLD, January 1, 1908—page 110]. The dividends for the year of the Dunlop Pneumatic Tyre Co. amount to 5 per cent. on the preferred shares, 8 per cent. on the ordinary shares, and 7½ per cent. on the deferred shares, totalling £137,246 7s. 9d. [= \$667,900.58]. The company write off £60,000 from their good will account and carry forward £19,271, against £16,030 last year. While the Dunlop profits have been large, it will be recognized from the above that the dividends distributed to the shareholders of the Pneumatic Tyre company have already been counted once, in part, in the report of the Rubber company.

PROFITS OF THE SILVERTOWN COMPANY.

THE accounts of the India Rubber, Gutta Percha, and Telegraph Works Co., Limited, for the year ended September 30, 1907, showed net profits of £56,800 14s. [= \$276,405.97]. The general business of the company showed an increase over that of the year before, and their works in England and France and

their cable steamers were all well employed. A good business had been done in tires. The dividends declared for the year amounted to 10 per cent., the same as for last year.

PALMER TYRE, LIMITED.

THE accounts for the year ended September 30, 1907, showed a profit of £7684 [= \$37,394.19], and the dividend amounted to 5 per cent. The company is owned by the India Rubber, Gutta Percha, and Telegraph Works Co., Limited, who, it is understood, will put more capital into the business. The company's product is the well known Palmer Cord tire.

POOR RESULTS OF PEGAMOID.

NEW Pegamoid, Limited, for their fifth year, ending September 30, 1907, report such poor results that no dividend was declared. The net return for the year was £233. The dividend was 8 per cent. for the first two years. The company succeeded the English corporation known as Pegamoid, Limited, floated in 1896 with £300,000 [= \$1,459,950] capital.

GREAT BRITAIN.

THE annual meeting of the Liverpool Electric Cable Co., Limited, was held on December 20. The dividend declared for the year was 7½ per cent., the same as last year. This company is an outgrowth from the Liverpool Rubber Co., Limited, with which it is affiliated.

The Dunlop Rubber Co., Limited (Birmingham), have taken on the manufacture of golf balls, producing an article with which some notable records have been broken.

The directors of the Amazon Steam Navigation Co., Limited, declared an *interim* dividend of 2 per cent. on account of the last business year, payable on and after January 2. The full dividend for the year for some time past has been 4 per cent.

Rubber Novelties Co., Limited, to manufacture rubber goods; registered in London, October 14, 1907; capital, £700. Directors: T. Mason (managing director), V. R. Milner, and W. Davies. Registered office: 75, Raval street, Salford, Manchester.

Boro Rubber Co., Limited, registered in London, December 6, 1907, with £5000 [= \$24,332.50] capital, to acquire the business carried on by A. Mallaby, at Bradford, as the Borough Rubber Co.

The new cable between New York and Havana, laid by the Commercial Cable Co. of Cuba, provides the most direct and speedy route between Great Britain and Cuba, there being only two intermediate points of transmission—Waterville, Ireland, and New York.

Joseph Fynney & Co. (India-rubber merchants and importers, 55 Brown's building, Liverpool) have issued their Diary for 1908, including a number of useful tables for ready reference, such as net cost of rubber after shrinkage in washing; price equivalents in cents and shillings per pound, francs per kilo, etc.; vulcanizing pressure and temperature table; and rubber statistics. It is, as usual, bound neatly in leather and is of convenient size.

MALACCA Rubber Plantations, Limited, in the Straits Settlements—mentioned several times in THE INDIA RUBBER WORLD on account of some Americans having been interested in its flotation—report that tapping proceeded during seven months, up to the end of October, 1906, when it was decided to wait until a larger number of trees had reached maturity. During that time some 30,000 *Hevea* trees yielded about 14,500 pounds of rubber and 5,000 *Ficus* trees 1,550 pounds.

THE Liberian Rubber Corporation, Limited, report that their trading for 1906 (their first year) was conducted at a net loss, in view of the cost of entering new fields, but they feel confident of better results for 1907. The company gathered during the year 116,025 pounds of rubber, besides handling 10,380 pounds for merchants—a total of 126,405 pounds.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

PRACTICALLY everybody of prominence in the trade in Akron seems encouraged at prospects of an early improvement in business conditions. Orders are coming in at almost all of the factories with more dispatch, and employes who have been idle for the past few weeks are returning to their work. Mr. B. G. Work, president of The B. F. Goodrich Co., it is true, was a bit pessimistic when interviewed for THE INDIA RUBBER WORLD.

"Of course I'm hoping that things will brighten up," he said, "but I can't say that our company is experiencing any great prosperity right now. And I don't want to say that conditions will be better unless I know that I'm telling the truth."

Mr. A. H. Marks, vice president of The Diamond Rubber Co., reports a marked improvement in business since January 1. "We are putting men back at work every day," he said, "and it won't be long until we are working them all full time again. I have reason to be greatly encouraged at our prospects."

James A. Braden, of the same company, said: "We have had a good run on bicycle and automobile tires, as well as on mechanical goods since the first of the year. Most of our salesmen whom we called in before Christmas are now back on the road."

Mr. F. A. Seiberling, of The Goodyear Tire and Rubber Co., is not inclined to worry over the situation. "People are beginning to take their stock down off the shelves," he said, "and orders are coming in better every day. It looks as though that long expected let-up in the financial stringency has at last arrived."

Mr. B. C. Swinehart, vice president and sales manager of the Swinehart Clincher Tire and Rubber Co., says business was never before as good as it is now. "We never before sold as many truck tires as we have disposed of this winter," he said. "I attribute this condition in part to the advance in the prices of feed for horses. It creates a demand for automobiles, and a demand for automobiles means a demand for tires."

The Stein Double Cushion Tire Co. are not getting as much business as could be desired, yet their officers are decidedly optimistic. "The attitude of our buyers leads us to believe that conditions will improve rapidly in the near future," says M. M. Newman, secretary of the concern.

* * *

AFTER a careful study of reports from all sections, Mr. W. B. Miller, sales manager and secretary of The Diamond Rubber Co., predicts a busy year for manufacturers of motor accessories. His investigation indicates that the amount of renewal business will be greater than ever before.

"The number of motor cars in use last year is not to be diminished," he figures. "If some owners do not see fit to use their machines the cars will pass into the hands of somebody who will. New cars, while not equal in number to last year's output, will reach in the aggregate a very large figure, making a lot of equipment necessary."

* * *

At the annual meeting of The B. F. Goodrich Co., on January 15, all of the old officers and directors were reelected; B. G. Work, president; F. H. Mason, first vice president; H. E. Raymond, second vice president and general sales manager; C. B. Raymond, secretary; W. A. Folger, treasurer; W. A. Means, assistant treasurer; E. C. Shaw, general manager of works; H. E. Joy, general superintendent. The directors are: Colonel George T. Perkins, F. H. Mason, B. G. Work, E. C. Shaw, H. E. Raymond, C. C. Goodrich and George W. Crouse.

The Aladdin Rubber Co., whose reclaiming plant at Barberton burned to the ground a short time ago, held their annual meeting last month. The directors elected were James Christy, Will Christy, Charles Heller, John H. Conner and Sidney E. Conner. Plans for the company's reorganization were discussed. The

rebuilt plant will soon be put into operation, with a capacity double that of the former plant.

Officers of the Whitman & Barnes Manufacturing Co., chosen at the annual meeting last month, are as follows: William H. Gifford, chairman; C. E. Sheldon, president; William Stone, vice president; William H. Eager, treasurer; Frank Hiscock, general counsel; George A. Barnes, general superintendent. The directors are George T. Perkins, C. E. Sheldon, C. I. Bruner, George C. Kohler, George A. Barnes, William H. Gifford, Frank Hiscock, William Stone and William W. Cox. The company gave up the manufacture of rubber goods some years ago, but the board still embraces some names identified with the rubber trade.

* * *

THE B. F. Goodrich Co. have established a branch house at 2, rue Brunel, Paris, and its opening has excited no little comment in France. For an American manufacturer to compete directly with France in making automobile tires has heretofore been regarded as almost foolhardy. Goodrich tires have been sold in Paris before now but never had a regular branch been established. Albert Augier, who has been associated for years with Henry Fournier, is in charge.

The office force of The B. F. Goodrich Co. at Akron are now occupying the spacious and beautiful new office structure. The building is four stories in height and constructed of stone and pressed brick. The correspondence department is in the basement, the officers of the company are on the first floor, the treasurer and his assistants on the second, the sales department on the third, and the advertising department on the fourth.

* * *

THE Mitzel Rubber Co., formerly located in Barberton but lately removed to Carrollton, Ohio, has filed a petition in bankruptcy in the United States district court at Cleveland. Assets are \$93,682.16 and liabilities \$70,130.40. The company not long ago went into the hands of receivers and by its latest action has simply transferred its litigation to the United States court. The plant is being kept in operation.

A suit has been filed in which the courts are asked to sell the property of the Superior Rubber and Manufacturing Co., at Cuyahoga Falls, Ohio, and divide the proceeds among the company's creditors. Calvin W. Vaughn is the petitioner.

* * *

FOR some time The Diamond Rubber Co. has been casting about for some means of offsetting the laws prohibiting tire chains. The latter have been placed under the ban in New York, many places in New Jersey and are about to be in Philadelphia. In their latest product the Diamond anti-skid tire, officials of the company think that they have solved the problem. The tire has a flat tread, studded with rivets of case hardened steel. Every rivet comes into contact with the road surface, and every one contributes a force against slipping. Jointly they prevent skidding absolutely. They are so built into the tread that no leverage tending to pull them from their place is exerted, and the slight wear is so evenly distributed that they will last as long as the ordinary tire.

* * *

THE Firestone Tire and Rubber Co. have issued a "Chauffeur's Moral Code." It contains ten resolutions, recommended to operators of commercial motor vehicles for the treatment of their cars and tires, and is designed to assist car owners to lengthen the life of their tires. Some of the resolutions are: not to overload, to keep the brakes working evenly, to keep oil and grease from accumulating on the tires, not to expose tires to extreme heat, to start the vehicle in a straight line, to stop the car gradually, not to run along street car rails, to choose the smoothest pathways, and to attend to damaged tires promptly.

* * *

MR. B. C. SWINEHART, of the Swinehart Clincher Tire and Rubber Co., will reside in Chicago in 1908, making his headquarters at the company's Chicago branch.

日本電線株式會社⁽¹⁾

三田土護謨製造合名會社⁽²⁾

日本護謨株式會社⁽³⁾

橫濱電線製造株式會社⁽⁴⁾

東京護謨株式會社⁽⁵⁾

明治護謨製造所⁽⁶⁾

東洋護謨株式會社⁽⁷⁾

木綿調帶合資會社⁽⁸⁾

東洋藤倉電線所⁽⁹⁾

上條商店⁽¹⁰⁾
住友伸銅所⁽¹⁵⁾

藤倉電線護謨合名會社⁽¹¹⁾

山田氣球製作所⁽¹²⁾

才一式調帶製造株式會社⁽¹³⁾

角市護謨製造所⁽¹⁴⁾

合資會社帝國護謨製造所⁽¹⁷⁾

帝國電線株式會社⁽¹⁶⁾

The India-Rubber Industry in Japan.

By A Special Correspondent.

THE demand for manufactured rubber goods in Japan is yearly increasing, and it is safe to forecast a very much greater demand as time goes on. This demand is not, however, likely to result in any increased import of manufactured rubber goods; in fact the tendency is rather to a decrease. This of course has not yet made itself very apparent in the customs returns, as will be seen from the figures which follow:

RUBBER GOODS.	RAW RUBBER.
1903.....\$264,748	1903.....\$108,566
1904.....138,800	1904.....274,328
1905.....145,777	1905.....427,975
1906.....229,079	1906.....292,595

Nevertheless the imports of manufactures seem certain to decrease with the increasing number of rubber factories which have been established within the last few years, and which are now being erected. The old established factories also are increasing their output, and recently a large increase of capital was made by a majority of the rubber companies. The market for their product is confined almost entirely to Japan and China, and their competition must consequently affect the quantity of imports into Japan; however, it is at present a competition in price entirely, since the question of quality does not count for very much. The better quality of goods is still imported, and this doubtless accounts for the apparent increase in values in the customs returns, for we believe that the quantity of imports has actually decreased, and that this decrease in quantity is more than offset doubtless by the increased value of the imported goods which are now in demand.

The majority of the rubber factories in this country are located in Tokio and its neighborhood. Osaka, although it is the principal manufacturing city of Japan, appears to have been somewhat backward in the matter of rubber factories. It is soon, however, to obtain the premier position in this, as it has in the matter of most industries. A syndicate of French capitalists, in conjunction with the Dunlop tire manufacturers, have

planned a very large factory in this district, and it will doubtless be in operation within a year or a little more. Foreign engineers were lately here looking into the matter, and there is a feeling in some quarters that the opening of this plant will revolutionize the rubber industry in Japan, so far as the manufacture of mechanical rubber goods is concerned.

With regard to the manufacture of insulated wires and cables, Osaka is also about to take a long step in advance. The owner of one of the largest copper mines in the country now has in course of construction an insulated wire works, which will probably be the largest concern of its kind in the empire. As the owner of these works is in the foremost rank of Japanese capitalists, it is safe to predict a glowing future for the enterprise.

Owing to the increase in the number of factories, and the extension of the already existing plants, competition among the rubber goods dealers already is very keen and the prospects for the future that it will be still keener. It is hoped, however, that this competition will ultimately lead to an improvement in the quality of goods now manufactured in this country, and that it will not tend, as it unfortunately seems to be doing at present, to the cheapening of quality in general.

Whatever the result may be so far as the manufactured article is concerned, the imports of crude rubber and the allied materials are increasing by leaps and bounds every year. The government, although wedded to a protective tariff, appears to view this with favor, for among the articles which were put on the duty free list when the tariff was revised last were crude india-rubber and gutta-percha. This revised tariff came into effect October, 1906. Notwithstanding that rubber is duty free, the government is endeavoring to foster the growth of rubber plants in the empire, and to this end is now encouraging the cultivation of rubber trees in Formosa, and instructing the natives in the methods of gathering the gum. No practical effect from this experiment, however, can be expected for several years to come.

LIST OF RUBBER FACTORIES IN JAPAN.

[THE name first printed in each case is the Japanese name expressed in Roman letters; the second is a translation of the firm name into English. The figures refer to the names of the companies in Japanese characters, on the opposite page, reading from top to bottom of the page, at the right.]

[1]	[9]	[10]
NIHON DENSEN KABUSHIKI KAISHA. <i>Japan Insulated Wire Works.</i>	TOYO FUJIKURA DENSEN JO. <i>Oriental Fujikura Wire Works.</i>	KAMIJO SHOTEN. <i>Kamijo & Co.</i>
[2]	[11]	
MITATSUCHI GOMU SEIZO GOMEI KAISHA. <i>Mitatsuchi Rubber Manufacturing Co.</i>	FUJIKURA DENSEN GOMU GOMEI KAISHA. <i>Fujikura Insulated Wire and Rubber Co.</i>	
[3]	[12]	
NIHON GOMU KABUSHIKI KAISHA. <i>Japan Rubber Co., Limited.</i>	YAMADA KIKYU SEISAKU JO. <i>Yamada Balloon Works.</i>	
[4]	[13]	
YOKOHAMA DENSEN SEIZO KABUSHIKI KAISHA. <i>Yokohama Electric Wire Works, Limited.</i>	OTASHIKI CHOTAI SEIZO KABUSHIKI KAISHA. <i>Otashiki Belt Manufacturing Co., Limited.</i>	
[5]	[14]	
TOKIO GOMU KABUSHIKI KAISHA. <i>Tokio Rubber Co., Limited.</i>	KAKUCHI GOMU SEIZO SHO. <i>Kakuichi Rubber Works.</i>	
[6]	[15]	
MEIJI GOMU SEIZO SHO. <i>Meiji Rubber Works.</i>	SUMITOMO SHINDO JO. <i>Sumitomo Wire Drawing Works.</i>	
[7]	[16]	
TOYO GOMU KABUSHIKI KAISHA. <i>Oriental Rubber Co., Limited.</i>	TEIKOKU DENSEN KABUSHIKI KAISHA. <i>Imperial Insulating Wire Co., Limited.</i>	
[8]	[17]	
MOMEN CHOTAI GOSHI KAISHA. <i>Cotton Belt Co.</i>	GOSHI KAISHA TEIKOKU GOMU SEIZO SHO. <i>Imperial Rubber Manufacturing Works.</i>	

One of the principal manufactures in which rubber plays a part, to which the Japanese are devoting their energies, is the manufacture of insulated wires. The copper ore from which the wire core is drawn is plentiful in the country, and the demand for insulated wires for all manner of electrical purposes is here, as elsewhere, growing yearly. The imports of wire for electrical purposes, during the years 1904 to 1906, were as follows:

	1904.	1905.	1906.
Submarine and underground telegraphic wires or cables.....	\$518,480	\$1,284,587	\$103,820
Electric light wire.....	380,130	385,711	410,677
Total	\$907,610	\$1,670,298	\$520,497

It will be noticed in the above statistics that the value of submarine and underground telegraph lines and cables imported in 1905 is far in excess of the imports for either 1904 or 1906. This is to a great extent explained by the war requirements, which came forward in the fiscal year 1905. Ultimately Japan expects to supply her entire requirements in this respect, as in many others. As stated earlier in this article, a large plant for the construction of insulated wire is now being erected in Osaka. The following is a list of the principal rubber factories now in operation in Tokio and its vicinity:

	Capital.	Value Products.
Japan Rubber Co., Limited.....	\$90,000	\$125,000
Oriental Rubber Co., Limited.....	125,000	60,000

Mitsubishi Rubber Co.....	40,000	250,000
Fujikura Cable Works.....	50,000	400,000
Meiji Rubber Co.....	35,000	100,000
Yokohama Cable Works.....	600,000	\$500,000
a Estimated		

A fair idea of the raw material consumed by the above factories will be arrived at by taking half the value of their output. This will not give an entirely accurate idea, as in some cases the material consumed is proportionately more, and in others less valuable, but it will give an average idea of the yearly consumption of all raw materials required by the factories.

SHINPO.

Osaka, January, 1908.

* * *

EDITORIAL NOTE.—The list on a preceding page of Japanese manufacturing concerns which use crude rubber is believed to be the most complete and accurate yet compiled, and it comes at a time to supplement fittingly the letter from our correspondent "Shinpo" (a word meaning "progress"). A Japanese manufactory as a rule requires long credits and is disposed to cover all its requirements through a single native house with which it sustains close relations. Such a supply house is expected to keep its customers accurately posted with regard to market conditions, and when and where to buy. The rubber manufacturers, for example, buy supplies extensively through houses like Messrs. Dewette & Co., of Yokohama.

Progress of Rubber Planting.

RUBBER PLANTING IN THE PHILIPPINES.

AN increasing interest in rubber culture in the Philippines is reported by the bureau of forestry at Manila, under date of November 20, to THE INDIA RUBBER WORLD. Rubber has been planted in the district of Davao, in the island of Mindanao, and also on the island of Basilan and along the east and west coast of Zamboango peninsula. Reports from ten plantations show standing about 9,000 Pará rubber trees, 61,000 Ceará trees and 1,000 *Castilloa*—total 71,000. It is estimated that the acreage is about 306 and this represents probably two-thirds of the total planting in the vicinity. The planting of Pará seeds at stake has not been a success, but nursery seedlings "stumped" at planting have made a good growth in every case. Ceará seeds are always planted at stake. Hemp, coffee, cacao, and cassava have given good results as intercrops with rubber. The report indicates that there are large numbers of seedlings in the nurseries of the southern planters, which probably will be set out this year at the beginning of the rainy season. Considerable orders are being placed with dealers in the Far East for seeds of *Hevea* and *Castilloa*. The local production of Ceará rubber seed is already large.

There is a colony of some 60 Americans in southern Mindanao, representing 40 or more companies formed for the taking up of government lands for the purpose of growing hemp. Much fertile land there is still unoccupied and can be acquired in leasehold on very favorable terms. Recently the possibility of combining rubber with hemp has become apparent and one of the planters writes THE INDIA RUBBER WORLD that before long rubber seems destined to become one of the principal crops there. The Davao Planters' Association, established February 1, 1905, is composed mainly of hemp growers, but Secretary Max L. McCollough writes that there is a constantly growing interest in rubber. The association would like to see new interests represented in the district, and to facilitate in every way possible the introduction.

RUBBER PLANTING IN MEXICO.

J. HERBERT FOSTER, manager of The Meriden Rubber Planting Corporation, reports (January 2) that the tapping done last fall on their plantation in Vera Cruz yielded more than 600 pounds of creamed rubber, from 4,800 trees, or a trifle more than 2

ounces per tree. It was the second tapping, and some of the trees yielded twice as much as last season. The cost is estimated at less than 20 cents (gold) per pound produced, against 25 cents one year ago, owing to the freer flow of latex. The trees were to be tapped again at once, and Mr. Foster expects to pay the expenses of the plantation this year from the sale of rubber.

Horace E. Levesley, managing director of The Mexican Rubber Co., Limited, owners of the plantation "La Esperanza," in Vera Cruz, is taking a vacation in Europe, the first he has enjoyed since he became associated with Mr. George Cullen Pearson several years ago in forming the plantation. Mr. Pearson has been residing in London for some time. There are now about 220,000 well developed trees on the property, and tapping on a commercial scale is expected to begin this year.

The Land Company of Chiapas, Limited, of London, have established a rubber plantation called "Eldorado," in Chiapas, in the neighborhood of the estate on which the late Señor Don Matias Romero did some rubber planting more than 30 years ago. The new company planted some 300 acres to rubber last summer.

Charles A. Leshner, for some years manager of "La Zacualpa" rubber plantation, has been appointed assistant to O. H. Harrison, at the head of La Zacualpa and the allied companies, with headquarters at Tapachula, Mexico. W. S. Fisher has been appointed manager of the La Zacualpa properties.

The 1907 annual report of the Continental Commercial Co. (St. Louis) gives the number of rubber trees (*Castilloa*) on their Mexican properties as follows: Jumiapa estate, 60,000; Oaxaca Coffee Culture Co. estate, 464,173; Monte Verde, 63,000; Lolita, 183,000; Pittsburg, 50,000; total, 820,173. They are from two years old upwards.

The shareholders of The Ohio Rubber Culture Co. (Canton, Ohio), have chosen as inspector of their plantation in Mexico this year Charles Eddy, of Akron, Ohio, who has started already on his inspection tour. Mr. Eddy is traffic manager of The B. F. Goodrich Co., with which firm he is reported to have been connected for 27 years.

Inspectors for most of the companies planting rubber in Mexico are now on the ground.

Antwerp, Havre and Congo Rubber.

IN their annual review of the Antwerp market for 1907, Messrs. Grisar & Co., the official brokers, devote their attention mainly to two points: (1) a caution against the careless preparation of crude rubber, and (2) the progress of rubber planting in the Congo region. First, however, may be introduced a table of the arrivals of rubber at Antwerp during the last ten calendar years:

YEARS.	Congo State.	Other Sources.	Total.
1898.....Kilos	1,734,305	280,286	2,104,591
1899.....	2,992,414	410,416	3,402,880
1900.....	4,902,003	796,032	5,698,035
1901.....	5,417,450	431,742	5,849,202
1902.....	4,992,954	411,031	5,403,985
1903.....	5,180,401	546,082	5,726,483
1904.....	4,723,618	1,040,238	5,763,856
1905.....	4,442,607	1,271,121	5,713,728
1906.....	4,593,759	1,178,303	5,772,062
1907.....	4,349,141	768,332	5,054,473

Messrs. Grisar & Co. say:

"As the above figures show, the production of rubber in the territories of the Congo Free State has remained essentially the same as during the past few years. As pointed out in our previous market reports, the maintenance of a normal and regular production is due to the measures promulgated by the government, for the purpose of preventing the exhaustive working of the sources of rubber supply. The decrease in imports of the various kinds of rubber is explained by the fact that the greater part of the kinds produced in the French Congo are at present being shipped to the Havre market.

"The quality of the Congo rubber continues to be excellent and highly appreciated by the consumers. However, we are unfortunately unable to apply the same statement to the preparation of many lots which arrived here during the year in a defective or pitchy condition. We could scarcely be too insistent in our advice to exporters to devote their most careful attention to this matter, and to cooperate for the purpose of preventing the shipment of insufficiently dried goods, which cannot possibly withstand the frequent handlings to which they are subjected during transportation.

"Among the various kinds of rubber, those produced on the Asiatic plantations continue to meet with the greatest favor in our market on the part of consumers.

"We are pleased to again be able to report this year actual progress made in the Congo in the important matter of planting. In connection with the crop of the year 1906, the planting of 2,664,725 rubber trees and *lianes* has been reported. The total amount of planting thus exacted both from government employes and private parties covers at the present time about 15,000,000 plants, taking into account the inevitable waste which is a necessary factor in enterprises of this kind. In addition to the aforesaid plantations, the establishment of which is provided for by law, other fields for the production of sources of rubber supply have been provided for the care of the government and of commercial companies. As far as the government is exclusively concerned, the planting done by the same may be summed up as follows:

	End of 1905.	End of 1906.
<i>Lianes</i> (creepers).....	8,575,000	10,150,000
<i>Manihot</i> , <i>Hevea</i> , <i>Ficus</i> , etc.....	157,000	188,000
<i>Funtumia elastica</i>	753,000	1,187,000
Total	9,485,000	11,525,000

"The following system of planting has been adopted and made incumbent on the interested parties, viz: *Lianes* at a distance of 3 meters along the rows, instead of 1 meter, which was the distance previously adopted. For the *Funtumia*, the minimum distance was increased from 3 meters to 4 meters in every direction. The plentiful results obtained up to the present time make it safe to presume that henceforth the *Funtumia elastica*

will be planted exclusively, since their growth and output appear to give the best results.

"It will be well for all those concerned in this matter to take the foregoing considerations thoroughly to heart, inasmuch as they are based on practical experiments extending over a period of several years. [It is presumed that the reference here to results obtained from planting *Funtumia* relates to experiences elsewhere than in the Congo Free State, where the culture of this species has been begun only of late.—THE EDITOR.]

"In addition to the aforesaid species, the government continues to actively pursue the propagation of the *Hevea Brasiliensis* in the territories where the soil and climate are favorable for its growth. In order to increase the number of seeds derived from full grown trees, which are more especially found at Boma, Coquilhatville, and New Antwerp, about 128,000 *Hevea* seeds, packed in moist layers have been shipped to the Congo Free State during the year 1907 through the care of the Colonial Gardens at Laekens, Belgium. The shipments made last year under this system produced excellent results, 95 per cent. of the seeds having arrived at Boma in good condition." [The report here gives statistics of the production of plantation rubber in Ceylon and the Federated Malay States.]

"During the past year, the rubber market has been subject to violent price fluctuations, caused more particularly by the financial crisis than by the precarious condition of the rubber industry.

"After a firm start in January, prices were unfavorably influenced in March and thereafter by the abnormal arrivals at Pará, coincident with a tightness in the American money market. After the markets had remained in an inactive condition during the entire summer season, with stocks increasing everywhere, the decline in prices increased rapidly during the fall months, and in November the intensity of the financial crisis made the bottom fall out of Pará rubber quotations, which finally declined from 5s. 12d. (in January) to 3s. 3½d. We have to go back to the year 1902 to find equally low prices. This condition of the market actually paralyzed business.

"Towards the end of the year the market remained demoralized in consequence of the violent fluctuations of Pará rubber, and we therefore terminate the year with an average decline of about 28 per cent. against the quotations in December, 1906, as shown by the following figures:

COMPARATIVE ANTWERP PRICES (FRANCS PER KILO).

GRADES.	End Dec. '06.	End Dec. '07.	Decline.
Kasai, red, I.....	13.20-13.45	9.00-9.40	30.11%
II kind.....	11.10-11.35	8.10-8.40	25.99%
Kasai, black.....	12.90-13.20	9.00-9.40	28.78%
Equeateur, Ikelemba, Lopori, etc.....	13.30-13.50	9.00-9.40	30.37%
Upper Congo, ordinary.....	11.80-12.05	8.50-8.80	26.97%
Aruwimi Uelé	11.25-11.65	8.50-8.80	24.46%
Mongala strips.....	11.25-11.65	8.50-8.80	24.46%
Red thimbles(root rubber). 6.25- 6.75		4.25-4.50	33.33%
a Pará fine	5s.-5s. 2d.	3s. 4d.-3s. 6d.	32.25%

[a In English money, per pound.]
[Ten francs per kilogram=87½ cents per pound.]

THE HAVRE MARKET.

A REVIEW of the rubber trade at Havre for 1907 has been issued by Jean Roederer, broker, of that port, the text of which is reproduced here:

"Thanks to the impulse given the Havre market during the past year in consequence of the decision taken by the principal companies holding concessions in the French Congo to ship their rubber in future to this market, the said market has become of considerable importance not only for Congo grades, but likewise for those originating from the other French colonies, such as Madagascar, Tonkin, and the Soudan.

"The geographical location of our port with its important system of regular navigation lines, insuring convenient and economical transportation in every direction throughout the world, appears to make it readily available for development into a general storage place for the sale of rubber in France. The imports of Havre have been:

	1906.	1907.
From the French Congo.....Kilos	314,025	802,678
Other sources (except Pará).....	339,847	232,321
From Pará	3,738,055	3,330,847
Total	4,391,927	4,464,123

"Importers have adopted the subscription method to facilitate the converting of their rubber into cash, a system which has stood the test in other markets [notably at Antwerp].

"Notwithstanding the comparatively large quantities imported this year, the goods found a ready outlet at prices largely equivalent to the parities of the regular markets. Only towards the end of the year, when the holders refused to accept the general decline, a certain quantity of rubber was withdrawn. For this reason we have been left by the end of December with an unsold stock of about 120 tons.

"The quality of the rubber imported from the French Congo is highly appreciated by the consumers, the product being homogeneous and generally of fine quality.

"The quality of the rubber produced in the Gabon district would be greatly improved if the different grades of which this

kind of rubber is composed could be adequately separated in Africa before shipping the goods, since the handling to which they must be necessarily subjected here is very injurious to the appearance of the product.

"The rubber market during the past year has felt the effect of the periods of financial crisis which have most seriously disturbed certain lines of goods and branches of industry.

"Prices have consequently undergone violent fluctuations, more especially during the second half of the year, at which time the crisis appears to have reached its most acute point. The highest and lowest quotations of Pará rubber during the year in question show, for instance, a total decline of about 35 per cent.

"The increase of the arrivals at Pará is not so large that it would not find an outlet for consumption by the present rubber industry, and the chief cause of the decline is closely connected with the commercial and financial crisis through which we are passing. However, the worst periods appear to be a thing of the past and an early revival of business does not seem impossible."

TOTAL IMPORTS OF RUBBER AT HAVRE.

	Kilos.		Kilos.
1898	2,138,000	1903	1,862,000
1899	1,856,000	1904	2,188,000
1900	2,350,000	1905	3,291,000
1901	2,241,000	1906	4,391,927
1902	1,948,000	1907	4,464,123

The Manufacture of Balata Belting.

By an English Correspondent.

BALATA belting, which, for fifteen years was made solely by Messrs. R. & J. Dick, at Glasgow, under their patent, is now being made by several firms, the original patent having expired. The manufacture has mostly been taken up as a side branch by india-rubber works in England and Germany, though in certainly two instances it forms the sole business of the companies concerned. Although balata is not rubber, its manufacture resembles that of the latter to the extent that inferior material may be made to pass muster as the genuine article when cheapening of the goods is resorted to in order to meet competition. Already the cheapening process has made such headway that balata belting is to be met with in which the product of the Venezuelan or Guianan forests forms only a fraction of the organic matter present. This procedure, the imitation of which is ascribed rightly or wrongly by British manufacturers to their German competitors, has naturally led to a good deal of worry in business circles.

Of course it may be an open question as to whether the use of the best quality balata is really necessitated, and indeed there is plenty of evidence that the second quality belting openly sold as such by British firms gives perfect satisfaction in its employment. Messrs. Dick, however, I believe I am right in saying, only supply pure balata belting now as of yore, and despite the new competition they continue to do a large business at prices on a higher level than obtain with the rest of the trade. How long this will go on remains to be seen; if it should turn out that the cheaper belting of other makers is found to give satisfactory results, one can hardly imagine that the supremacy of the Glasgow firm will remain unaffected. In Free Trade England the German makers of certain classes of rubber goods have been accustomed to dump their excess production at prices with which home manufacturers have found it exceedingly difficult to compete, and from what reaches me from commercial circles it would seem that something of the sort is being done with balata belting. This is now being energetically pushed by London distributors at prices which suggest an effort to get business at whatever cost, to judge by the liberal discounts allowed off the list prices of really good quality.

From these remarks it will be seen then that the British manufacture, though so young as a competitive industry, has early had to contend with business conditions of a disquieting nature. It is matter for consideration whether the output will not before long exceed the demand. There is no reason to suppose that belting generally has suddenly sprung into greatly increased demand, and it is a fair surmise that a good deal of the business done in balata belting is at the expense of leather, rubber, cotton, or camel hair.

The principal advantage possessed by balata belting over other materials, such as leather and cotton, is in resistance to damp, though as an off-set to this its liability to soften at moderately high temperatures renders it of much less utility than other materials in warm climates. In this respect it is of course not inferior to gutta-percha belting, which is made to a limited extent, but it cannot compete with rubber belting or with the special form of hair belting brought out by Reddaway & Co., and which has a vulcanized rubber coating all over its surface and sides. Exceptional situations and purposes apart, however, it is clear that the low price and general utility of balata belting foreshadow increasing sales in the future. To quote only one special instance where it has recently come into favor, we have the elevator belts used in running machinery, especially for raising ore which has been crushed under water. Such belts are about 40 feet long by 9 inches wide, and are continually in contact with cold water.

The firms now actually manufacturing balata belting in Great Britain are R. J. Dick & Co., Glasgow; Turner Brothers, Limited, of Rochdale, the well known asbestos manufacturers; the Irwell and Eastern Rubber Co., Salford, Manchester; and The Manchester Balata Belting Co., of Clayton, Manchester, with which concern rumor associates the name of Messrs. Frankenburg. The Gandy Belt Manufacturing Co., of Seacombe, Cheshire, a concern which a few years ago bought up the rights of Velvrit, Limited, as far as the belt manufacture is concerned, are certainly announced as balata belt dealers, but like several other home and foreign firms there seems some doubt as to whether in this particular article they come strictly into the category of

manufacturers. Among German firms who make a specialty of balata belting are the Guttapercha-Waaren und Treibriemen-Fabrik of Löwitz & Rohlf, at Altona, a suburb of Hamburg, and the firm of Scholtz, of the latter city; the well known Calmon Rubber and Asbestos Works being also credited with making it. The large belts made by the Altona rubber company mentioned above have already had pictorial mention in THE INDIA RUBBER WORLD. I may say that it is not the easiest matter in the world to give a list of the actual manufacturers; mention may be made, however, of the Christiania (Norway) balata belting factory, Den Norske Remfabrik.

To give a synopsis of the balata belting manufacture, it may be stated in a general way that the machinery used closely resembles what is ordinarily employed in a rubber works. So far the business has not been of importance enough to warrant the rubber machinery makers issuing special catalogues, and the work so far done has been rather to the design of the individual belting manufacturers than from standard patterns of machinery. Of special mention in this connection is the firm of William Rowan & Sons, Park lane, Bridgton, Glasgow, who have specialized in balata belt machinery.

To return, however, to the manufacture, the raw balata, which is used both in the form of sheet and block, after having been washed and dried, is dissolved to a thick paste in coal tar naphtha or shale spirit if the current price is in the latter's favor. This operation is carried out in a large closed-in vessel which hardly calls for minute description. The fabric, which is a coarse canvas, is passed through the solution on the belt sticking machine which in its form much resembles an ordinary spreading machine. When the solutioning has been completed and the solvent evaporated, the fabric is doubled to form a four-ply and passed through calender bowls whereby the balata is forced into the interstices of the canvas to form a homogeneous mass. The subsequent process of stretching is of some importance both to the manufacturer and the purchaser. The former is benefitted by the increase of length obtained and the latter by having the belt well stretched at first is free from trouble associated with "taking up" after the belting has been in use for some time.

There is general testimony among users of balata belting to the non-necessity of taking up and the claims of the manufacturers in this respect need not be considered exaggerated. This stretching operation is carried out on a special machine worked by hydraulic power. In the case of endless belting the making of a perfect joint is an important desideratum, and for the purpose a solution of balata in bisulphide of carbon is commonly used, the exact proportion of the ingredients being a matter requiring careful attention. The coating of balata which forms the face of the belt and which is put on after the compression in the calendar may be of the same composition as that of the naphtha solution, but is not always so. In some makes of belting a different material is used and economy has also been effected by the admixture of a small amount of mineral matter.

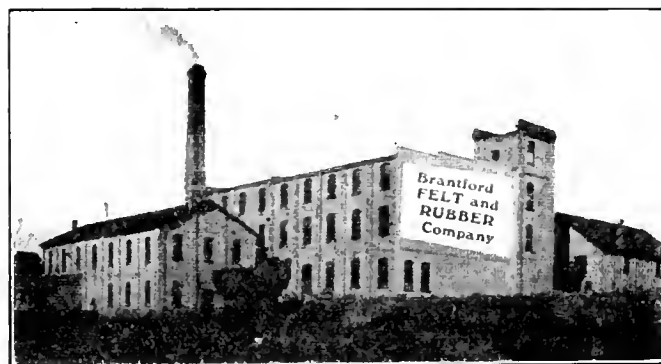
FIRE HOSE DAMAGED BY ACID.

THE care of fire hose is a matter that the chief engineer of every well managed fire department is constantly watching and to which he gives his close attention. Now and then, however, by accident or through the carelessness of persons to whom this duty is assigned, in handling acid carboys or acid charges in close proximity to fire hose, a small quantity may be thrown on the fabric jacket and ruin several hundred feet of high grade and expensive hose as it lies coiled up in the fire station, or when chemical engines are being recharged at fires. These accidental occurrences are not always noticed, until, at the next succeeding fire, the hose, to all intents and purposes, appears to be defective, and, in some instances, is returned to reputable and reliable manufacturers, with the complaint that it has not stood the test of

wear guaranteed, and a request that the defective goods be replaced. These demands, of course, are made in good faith and in ignorance of the true cause that put the hose to the bad. A little care in handling acids will entirely prevent the foregoing trouble. Sometimes, however, this may occur at fires in buildings where chemicals are manufactured or stored, and vessels containing acids are broken, and the acid mingles with the waste water and saturates the hose lines which have been run into the burning building—*Fire and Water Engineering*.

A FELT AND RUBBER COMPANY IN CANADA.

THE readers of THE INDIA RUBBER WORLD will perhaps remember the felt and rubber footwear factory that was started at Saugus, Massachusetts, as the Snowdrift Footwear Co. [See our issue of July 1, 1900—page 267.] But for some reason or other it went out of business, not because of inherent fault in the goods but in all probability from lack of capital. The inventor of this type of footwear, Mr. H. C. Richardson, of Haverhill, Mass., was more successful in Canada, where he started the Brantford Felt and Rubber Co., Limited, which is now operating successfully. The company's factory is situated at Holmdale,



THE BRANTFORD FACTORY.

where they have four buildings of mill construction, one of them three stories 155 x 55 feet, and the three other two-story buildings which are respectively 88 x 34 feet, 55 x 21 feet and 26 x 57 feet. This plant gives them room to make 250 pairs a day and at the present they are making about one-half that ticket. The company, by the way, are working under Mr. Richardson's patents. The issues in the United States were numbered as follows: The first, issued August 28, 1906, No. 829,487. The additional patents were September 2, 1907, No. 864,916, and October 15, 1907, No. 868,484. The product of the company is wholly confined to footwear of felt and rubber made under these patents, the line covering a stormproof boot, a dry snow boot, a snagproof gum over, and a patent fold felt sock. The goods are exceedingly tasteful in appearance and are very durable, and have appealed very strongly to Canadian footwear dealers.

THE Faultless Rubber Co. (Ashland, Ohio) are marketing a new line of cloth lined rubber goods—water bottles, fountain syringes, and combinations—under the brand "Wearever," which are referred to as being very light, strong, and durable. They come in maroon (non-blooming) or white, with smooth or ribbed surface.

THE Selangor Government Gazette in a recent issue contained a notice regarding a patent for an invention for "a wheel for motor cars or other vehicles manufactured in one entire piece and wholly from rubber, gutta-percha, or other elastic materials." rials."

SEND for the Index (free) to Mr. Pearson's "Crude Rubber and Compounding Ingredients."

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED DECEMBER 10, 1907.

- N**^{O.} 873,016. Pneumatic and solid tire for vehicle wheels. J. Burnham, London, England.
 873,021. Electrotherapeutic syringe. H. R. Cool, Bradford, Pa.
 873,143. Garden reel. R. D. Wirt, assignor of one-fourth each to E. C. Wilson and R. Keables, all of Philadelphia.
 873,275. Catheter user's portable mechanical assistant. J. F. Spalding, Kansas City, Mo.
 873,420. Rubber mat [having vulcanized therein a multiplicity of metal spheres]. T. P. Farmer, Southwest Harbor, Me., assignor to Protective Tread Co., Boston.
 873,501. Elastic tire for wheels. T. L. Carhone, Charlottenburg, Germany.
 873,510. Rubber boot and shoe. T. Crowley, Lambertville, N. J.
 873,551. Rubber boot and shoe. T. E. Hurley, Beverly, Mass.
 873,602. Overshoe. J. D. Price, assignor of one-half to H. G. Powell, both of Cleveland, Ohio.
 873,627. Valve for hermetically closable jars. Gray Staunton, Chicago. [The principle involved is illustrated in connection with a former patent granted to the same inventor, in THE INDIA RUBBER WORLD, December 1, 1905 on page 83.]

Trade Marks.

- 29,617. New Miraculum Corporation Ltd., Melbourne, Australia. The word *Miraculum*. For a tire filler.
 29,937. Goodyear's India Rubber Glove Mfg. Co., Naugatuck, Conn. A glove in outline. For rubber footwear.
 29,953. Mount Vernon Belting Co., Baltimore, Md. The words *Mount Vernon*. For stitched canvas belting.
 30,015. Woonsocket Rubber Co., Woonsocket, R. I. Outline of Atlas shouldering the world. For rubber footwear.
 30,403. George Borgfeldt & Co., New York city. The word *Coronet*. For rubber combs.
 30,809. National India Rubber Co., Bristol, R. I. The word *National*. For rubber footwear.
 31,006. United States Rubber Co., New Brunswick, N. J. The words *Bridge Brand*. For footwear.

ISSUED DECEMBER 17, 1907.

- 873,728. Syringe [with compressible bulb]. B. F. Crisenberry, Elwood, Ind.
 873,738. Vehicle tire. J. Eckhard, Buffalo.
 873,841. Vehicle wheel [with hollow rubber cushioning balls]. C. E. Cole, Cleveland.
 873,892. Hose coupling. G. E. Petterson, Pine Bluff, Ark.
 873,907. Vehicle wheel [with resilient tread]. W. E. Snediker, New York city.
 873,919. Protecting shield or guard for pneumatic tires. W. S. Arnold, San Francisco.
 873,928. Overshoe holder. G. W. Hopkins, Morris, Minn.
 873,940. Electrical connection for hose couplings. F. Hoffman, Cincinnati.
 873,957. Vehicle tire. G. A. Pearce, Jr., New York city.
 874,026. Life preserver. A. Necker, Philadelphia.
 874,092. Ear tip for stethoscopes and other aural instruments. C. H. Liverpool, Boston.
 874,101. Waterproof fabric. E. Merou, Paris, France.
 874,251. Implement for massage, shampooing, and other purposes [having a rotary body position of hard rubber, with soft rubber teeth]. H. F. Schelling, Weehawken, N. J.
 874,287. Machine for coating the strands of a thread and also the twisted thread. E. D. C. Bayne and L. A. Subers, Cleveland.
 874,324. Means for attaching tires to vehicle wheels. E. Gerbert, Waltershausen, Germany.
 874,340. Rubber overshoe. F. C. Hood, Boston.

Trade Marks.

- 28,844. The Cravenette Co., Ltd., Bradford, England. The word *Cravenette*. For clothing.
 30,730. Boston Rubber Co., Boston. A bell in outline. For rubber footwear and clothing.

ISSUED DECEMBER 24, 1907.

- 874,844. Detachable wheel rim. R. Healy, Brooklyn, N. Y. [Mr. Healy is connected with the Healy Leather Tire Co., of New York.]
 30,319. W. H. Sterling, New York city. The words *Tire Life*. For tire filler.

ISSUED DECEMBER 31, 1907.

- 874,951. Overshoe retainer. R. E. Fraizer, Cloverdale township, Putnam county, Ind.
 874,964. Pneumatic tire protector. W. M. Jamieson, Te Papa, near Ohuchunga, New Zealand.

- 874,982. Conveyer belt. H. C. Norton, San Francisco.
 874,983. Foot and leg bath for horses. H. R. O'Brian and J. R. Coulter, Oxford, Ohio.
 874,984. Implement for applying rubber tires. [For solid tires.] S. A. Oliva, Danbury, Conn.
 875,019. Hose clamp. H. A. Wahlert, St. Louis.
 875,053. Pneumatic tire. C. E. Duryea, Reading, Pa.
 875,144. Rubber sandal. A. O. Bourn, Bristol, R. I.
 875,298. Rubber compound and material for use in making the same. [Comprising the bitumen from asphaltic petroleum and rubber.] E. W. Strain, Philadelphia.
 875,351. Resilient tire. I. W. Hodgson, Minneapolis, assignor of one-fourth to P. W. Herzog, St. Paul, Minn.
 875,397. Bottle stopper. E. M. Willis, Kenton, Ohio.
 875,439. Elastic webbing. S. Kops, New York city.
 875,542. Tire valve stem protector. C. W. Luffey, Little Rock, Ark.
 875,574. Rod packing. O. J. Garlock, assignor to The Garlock Packing Co., both of Palmyra, N. Y.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 4, 1907.]
 17,894 (1906). Steel studs for tire tread bands. F. W. Brampton, Wolverley.
 17,983 (1906). Pneumatic tire between inner and outer rims, the latter being flexible, formed of leather and riveted metal, and having an tread. W. J. Harvey, London (W. A. Hassen, Cape Town.)
 18,048 (1906). Billiards, with rubber pads, for an ordinary dining table. T. W. Graves, London, and R. Arrowsmith, Staffordshire.
 18,110 (1906). Screw stopper with rubber ring. D. Hurst, A. E. Frost, and G. J. Orange, Lancashire.
 18,125 (1906). Spring wheel, with solid rubber tread enclosing a pneumatic tube. B. J. Macauley and J. A. Hall, Eastbourne.
 18,192 (1906). Segmental rings instead of security bolts for attaching pneumatic tires. H. Reid, A. T. Reid, and J. Rickie, all of Glasgow.
 18,264 (1906). Goloshes with wearing sheet of leather in the heel. A. C. Nicholls and J. G. Selley, Canterbury, New Zealand.
 18,314 (1906). Hose reel. H. Denton, Ilaby, Leeds.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 11, 1907.]
 18,414 (1906). Pneumatic tire with recessed tread to prevent slipping. H. G. Harold, Brockley.
 18,457 (1906). Detachable wheel rim. Austin Motor Co. and H. Austin, Northfield.
 18,500 (1906). Elastic tire composed of a series of blocks. J. V. F. A. Yberty and E. B. Mergoux, Royat-les-Bains, France.
 18,557 (1906). Detachable tire carrying rim. F. H. Richardson, Sunderland.
 18,569 (1906). Pneumatic with studded tread band. L. C. de Mocomble and A. Demase, Paris, France.
 18,587 (1906). Machine for the manufacture of pneumatic tire covers, formed either with beaded or wire edges, in one operation. New Eccles Rubber Works, and J. George, Eccles.
 18,646 (1906). Spring wheel with elastic tire. R. Rayson and S. Davis, Windsor, Victoria, Australia.
 18,813 (1906). Detachable tire carrying rim. R. Finlay, Gateshead-on-Tyne.
 18,930 (1906). Spring wheel with pneumatic or solid cushion. C. J. Petrie, London.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 18, 1907.]
 *18,958 (1906). Horse brush. J. C. Hickson, Nathalie, Va.
 18,963 (1906). Detachable rim for pneumatic tires. F. Loustaunau, Paris, France.
 *18,968 (1906). Pads for boot buffing machine, composed partly of sponge rubber. P. M. Justice, London. (Manufacturers' Machine Co., Montclair, New Jersey.)
 19,025 (1906). Detachable rim for pneumatic tires. F. Loustaunau, Paris, France.
 19,052 (1906). Rubber tips for billiard cues. W. and F. Wunsch, Aachen, Germany.
 19,090 (1906). Spring wheel, with pneumatic tube seated in a wooden ring enclosed in a metal trough carried by the felloe. B. C. Ouradou, Perpignan, France.
 19,105 (1906). Rubber eraser formed also for use as a pencil holder

- and point protector. C. A. F. Gregson and G. Rayner, Norfolk.
 19,201 (1906). Tire cover with tread formed of layers of jute or hemp, treated with emery and shellac solution, and solutioned together and covered with rubber. J. Blumfield, Beccles.
 *19,221 (1906). Tire rim with outwardly flaring flanges. E. Chaquette, New Rochelle, New York.
 19,224 (1906). Spring wheel with elastic tire. J. Slee, Earlestown.
 19,230 (1906). Detachable tire carrying rim. Count G. Szechenyi, Vienna, Austria.
 19,329 (1906). Pneumatic tire with puncture preventing band of leather. J. Lelong, Loue, France.
 19,337 (1906). "Twin" elastic tires spaced apart to minimize dust raising. E. Easton and G. Franklin, Southampton.
 19,342 (1906). Nonskid studs for tire treads. G. W. Beldam, Ealing.
 19,438 (1906). Fabric with zigzag wire embedded for tire treads. J. Byron, Liverpool.
 [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 27, 1907.]
 19,590 (1906). Pneumatic tire. I. Weening, London.
 19,598 (1906). Bolt for securing pneumatic tires to detachable rims. Baron V. Barreto, Marlow.
 19,648 (1906). Heel protector. W. H. Davis, Canton, Cardiff.
 19,671 (1906). Pneumatic tire with a series of parallel air tubes inflated by one valve and branches thereof. J. Waite, Chelmsford.
 *19,715 (1906). Spring wheel with pneumatic and rubber cushioned hub. C. F. Marohn, Milwaukee, Wis.
 19,722 (1906). Heel protector. F. W. Schroeder, London.
 19,894 (1906). Utilization of waste rubber. [See THE INDIA RUBBER WORLD, January 1, 1908—page 107.] T. Gare, New Brighton.
 19,905 (1906). Studded tread band of balata belting for pneumatic tires. P. F. Wiley, Boscombe.
 19,955 (1906). Pump valve. W. H. Lewis, New Brighton.

THE FRENCH REPUBLIC.

Patents Issued (With Dates of Application).

- 377,937 (May 2, 1907). E. W. Baker. Attachment of tires to wheels.
 377,976 (May 21). P. Buthion. Product for rendering asbestos indestructible.
 377,992 (May 21). F. A. Ellis. Tire.
 378,006 (May 22). A. F. Bucchini. Multiple air tubes for tires.
 378,048 (May 23). E. Guibert. Elastic wheel.
 378,168 (May 25). J. L. Villard. Cover for tires.
 378,191 (May 28). G. Plasse. Elastic wheel.
 378,236 (May 29). J. Desucher. Elastic wheel.
 378,261 (May 30). A. Latimer. Cover for tires.
 378,282 (May 30). Denning and Foster. Protective tread for tires.
 378,309 (April 6). E. J. L. Broux. Sectional pneumatic tire.
 378,315 (May 6). Perez and Castellort. Tire protector.
 378,251 (Aug. 4, 1906). Rouxville. Process for reclaiming rubber.
 378,209 (May 28, 1907). J. W. V. Mason. Machine for vulcanizing and finishing rubber shoes.
 378,351 (May 18). Doolittle. Attachment of tires to wheels.
 378,399 (June 1). L. Sellier. Tire protector.
 378,588 (May 31). H. Guerin and Jais. Elastic tire.
 378,603 (June 7). Silverwood. Attachment of tires to vehicles.
 378,600 (June 7). Société J. Hausmann et fils. Nipple for infant's bottle.
 378,691 (June 11). Baglin. Protective tread for tires.
 378,731 (June 12). P. Buchillet. Tire protector.

[NOTE.—Printed copies of specifications of French patents may be obtained from K. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

NEW RUBBER RECLAIMING PROCESS.

THOMAS GARE, of New Brighton, England, is out with a patent for reclaiming rubber by a combined mechanical and chemical process which consists in powdering vulcanized scrap, softening it in boiling resin, feeding it through a tubing machine, the die of which consists of a number of small orifices [The late Robert Cowan had a patent on this for cleansing reclaimed rubber] and doing the whole thing within 5½ minutes, the mass entering the tubing machine as a semi fluid and emerging as completely regenerated rubber.

EMPIRE State Tire Co. (Buffalo, New York), the incorporation of which was noted in THE INDIA RUBBER WORLD October 1, 1907 (page 20), have the New York rights for the Greenwald tire patents. They have erected at Nos. 198-200 Terrace, Buffalo, a complete tire repair plant, and plan to install repair plants for garages or repair stations. They have secured as superintendent Lemon Greenwald, formerly of Akron, Ohio.

TESTS OF NON-DEFLATION TIRE TUBES.

FOR several months the mechanical branch of the Association of Licensed Automobile Manufacturers, through its tire committee, has been endeavoring to cooperate with tire makers toward the elimination of annoyances from tire troubles in the nature of blowouts and punctures. Many interesting tests have been made for elasticity and resiliency of various rubbers used in tires, and extensive research has been given to the cause of blowouts and punctures.

It has been discovered that in a large percentage of the blowouts the cause was from heat generated inside of the tube from friction, which caused an expansion of the tube itself, so that when the tire came in sudden contact with a sharp stone or other obstruction there was not enough space for contraction in the tube, and necessarily something had to give way, thereby causing the blowout.

Henry Souther, metallurgical expert for the association, has just completed a remarkable test for heating, and his report shows conclusively that the time is near when the chances for blowouts will be minimized. The test was made with a non-deflation tube and two other ordinary makes of tubes, to ascertain if possible the comparative heating properties.

To obtain accurate measurements of degrees two thermometers were made and inserted by drilling holes through the wooden felly and metal rim of the wheel and using a steel case opened on the lower end in which the thermometer was inserted. The case was shaped like a large valve, similar to the valves on ordinary tubes with a cap projecting through the felly, so that by removing the cap the thermometer, which had been placed in contact with the tube, could be seen and the degrees of heat recorded.

The test was made on a run from the Engineers' Club to Long Island City and thence to Patchogue, L. I., a distance of 68 miles. The conditions of the road in many places were such that high speed was possible and 48 to 52 miles per hour for six or eight miles was attained. The average speed on the trip was 36 miles. Mr. Souther's report mentions that a certain non-deflation tube named by him runs cooler than ordinary inner tubes. His report reads:

"Just how much cooler this would be in hot weather, I am not prepared to say, but judging from the laws of heat the percentage of increase above atmosphere ought to hold, and that is the reason this method of summarizing had been used.

"That is to say, in hot weather with the temperature of 70° F., the increase would be for the regular inner tube 60 per cent. or 42° F., and making a total temperature of 112° F., whereas, from the results of my experiments I find an increase in the temperature of 45 per cent. in the deflation tube, making it only 101.8° under the same conditions.

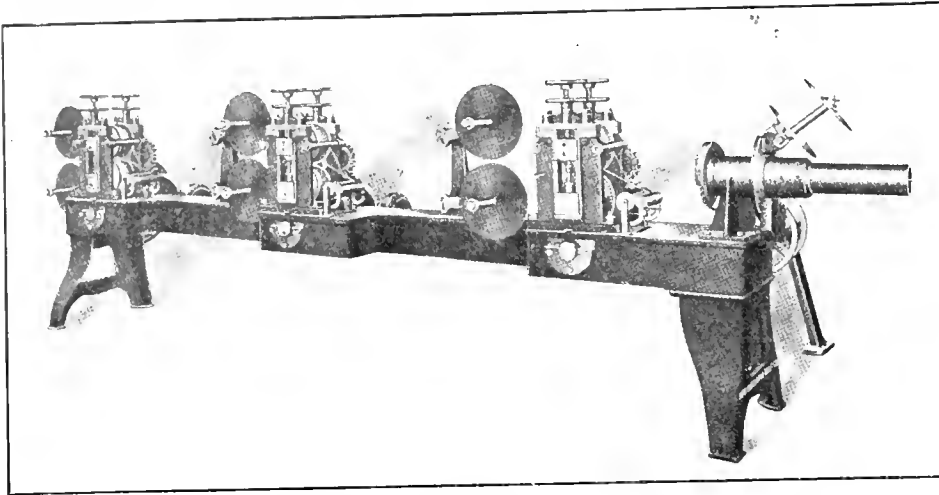
"The reason for the cool running of this non-deflation tube is very obscure. It is a well known fact to all familiar with the work done by tires that the more material in the tire the more work is done in moving over the road under a given load. In this non-deflation tube there is more material than in the simple tube, caused by double walls and the plastic material between the double walls, which make it non-deflating. Consequently many skilled in the art have believed that this tube would run hotter. I consider that belief erroneous, in view of the tests which I have just made."

THE secretary of agriculture of the United States said recently in a public address that for years his department had been distributing camphor trees, and that thousands of trees were growing in the southern and Pacific coast states. Camphor had been made successfully from some of these, on an experimental scale. A manufacturing concern using \$500,000 worth of camphor yearly was forming a 2,000 acre grove of camphor trees in Florida, with a view to making their own camphor.

THREE HEAD RUBBER COVERING MACHINE.

THE machine illustrated here is of very rigid construction, and is designed for handling wires and cables up to $3\frac{1}{2}$ inches diameter. It consists of a rigid bed, provided with heads driven by bevel gearing from the main shaft which runs along the side of the bed. Each head is provided with compensating gear-

stains by simple attrition. Of late years, however, a certain amount of wet cleansing has been done, and instead of inventing their own machine for it the rubber trade turned to the great cleansers of the world, the American Laundry Machinery Manufacturing Company, and took a machine—the Watkins washer—built for an entirely different purpose, and found it worked perfectly. An illustration of the machine is given herewith.



LARGE THREE HEAD RUBBER COVERING MACHINE.

ing, by which arrangement the cutters can be reground when dull, and used until considerably reduced in diameter.

The heads are so arranged that one housing can be taken away in order to change the cutters without removing the shaft or gearing. Each head is provided at the back with wire and rubber strip guides and an arrangement for holding the rolls of rubber. At the front is a pair of wooden rolls with spring tension driven by a small belt from the cutter shaft for carrying off the scrap.

The cutters or compression rollers are 9 inches in diameter, and are made of hardened steel, shaped and ground to the proper size. The rolls of rubber used on the machine are 14 inches in diameter and of the proper widths to suit the wire or cable.

A countershaft is furnished with the machine which has 24-inch tight and loose pulleys for a 6-inch belt, and should make 150 revolutions per minute. This gives a cutter speed of 24 revolutions per minute, and feeds the wire or cable through at the rate of 56 feet per minute.

A cross shaft at the front of the machine is geared from the main shaft, and has a $14 \times 2\frac{1}{2}$ -inch flanged pulley for driving a wind-up fixture.

The floor space of machine is 14×3 feet, and the net weight of machine and countershaft, 4,200 pounds.

A taping head, shown on the cut, placed at the extreme front of the bed can be furnished when desired. This taping head has a 4-inch hole through the spindle, and carries a roll of tape $10\frac{1}{2}$ inches diameter of any width up to 6 inches. The floor space, with taping attachment, is 16×3 feet. The machine is manufactured by the New England Butt Co. (Providence, Rhode Island).

WASHING RUBBER GOODS.

IT is not only raw rubber that needs washing. Many of the smaller articles in soft rubber, after vulcanizing and trimming, must be washed and scoured to remove stains. The ancient way was to do most of this by putting them in tumbling barrels, sometimes with a charge of sand and pumice stone added, and removing the

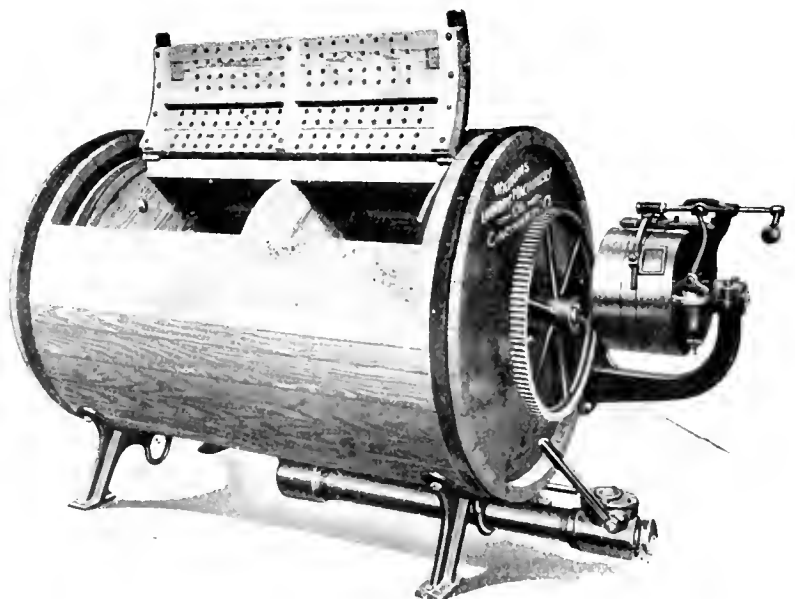
BEDS FOR OCEAN CABLES.

RADIOLARIAN ooze and other soft muds in the deeper parts of the ocean floor make a good bed for ocean cables to rest in, and we learn from Dr. Klotz, who has been telling the story of the British Pacific cable, that cable steamers will swerve many miles from a straight line to avoid craters and hard, undesirable ground and find a mud floor, where the line is least exposed to injury.

At the present prices of gutta-percha, the essential envelope of copper cables, it is highly desirable to find widespread beds of radiolarian or globigerina oozes, which help to give long life to these channels of communication. Deep sea cables last

much longer in the tropics than in the northern oceans, and the reason is that in the tropics the marine life, whose remains are the largest constituent in the formation of the soft muds of the sea floor, is more abundant than in the waters further north or south.—*New York Sun*.

THE Bayne-Subers Tire and Rubber Co. (Cleveland, Ohio), the incorporation of which was noted in THE INDIA RUBBER WORLD, November 1, 1907 (page 59), have not yet made any announcement regarding their purposes, but it is known that the organizers of the company have been experimenting for the past two years on a certain manufacturing process for the betterment of the automobile tire and high pressure tubing of all descriptions, the principle of which is outlined in United States patent No. 837,041, issued to E. D. C. Bayne and L. A. Subers.

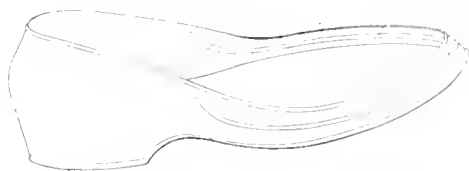


THE WATKINS "A" WASHER.

New Rubber Goods in the Market.

ANOTHER "STICK FAST" SHOE.

EX-GOVERNOR BOURN, of the Bourn Rubber Co., has for years been an inventor and investigator in rubber. He has lately brought out a sandal, ribbed in the inner side of the vamp, designed to be an "invisible" rubber that will stay on the shoe. The general detail will be seen from the outline drawing herewith.



ANOTHER "STICK FAST" SHOE.

A LARGE ATOMIZER.

The accompanying illustration from a recent catalogue of the Russian-American India Rubber Co. (St. Petersburg) indicates what probably is the largest atomizer, including rubber in its make up, that has ever been placed upon the market. Assuming the figure in the engraving to represent a man of average height, an idea of the size of the atomizer may readily be gained, and it is left to the reader who may be interested in articles of this class to decide for what purposes the Russian production may be adapted.



A LARGE ATOMIZER.

cover, it may be said practically to fill no space. Its size is such that it can carry inner tubes, clothing, or any article that could naturally find its way into a tire case, and instead of being a burden, it gives the satisfaction of making use of room that heretofore has as good as gone to waste. The carriers are made from tan waterproof canvas lined with linen and fitted with loops for razors, combs, and pockets for sundries. A loop is fitted to it and four straps secure it within the spare tire cover.

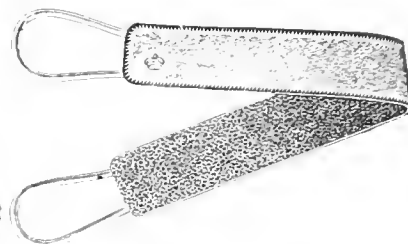
RUBBER SPONGE BATH MIT AND BATH BELT.

Three illustrations shown herewith relate to novelties the manufacture of which involves the use of sponge rubber. In the case of each of these strong duck is used, with one side covered with a thick layer of rubber sponge, the shape of each article being sufficiently indicated by the engravings. On the other

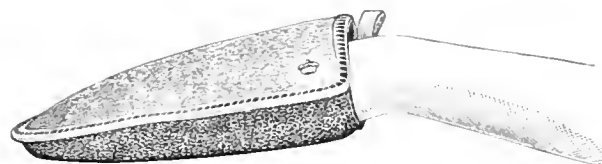
side is a fabric such as Turkish toweling. Many applications of these articles for the toilet will readily suggest themselves, but it may be mentioned that they have been heartily recommended by physicians for massage. The belt here illustrated is



LOOFAH MIT.



SWEDISH MASSAGE BELT.

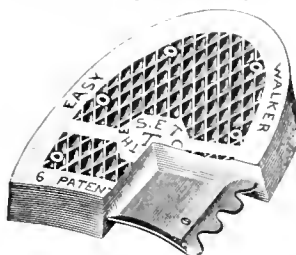


REVERSIBLE BATH MIT.

convenient in size and easy to manipulate and has the advantage of bringing both hands and arms into action, thereby adding to the artificial means of getting health and beauty by exercise. These goods are protected by patents. [Hanover Rubber Co., Limited—Julius Lehmann, American agent, New York.]

THE "EASY WALKER" RUBBER HEEL.

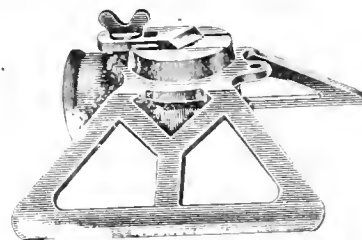
An advantage of the "Easy Walker" rubber heel is that it can be attached permanently to shoes without the aid of cement or leveling the heel seat. It is referred to as being made of good wearing rubber, in all sizes for men and women, both full and half heels, and is sold generally by leather and findings dealers in the United States and abroad. It is pointed out that these heels are not sold at as low a price as heels which do not contain the patent spring steel holding plate which forms an important feature of the "Easy Walker." [The Springfield Elastic Tread Co., Springfield, Ohio.]



"EASY WALKER" RUBBER HEEL.

THE "COMBINATION" LAWN SPRINKLER.

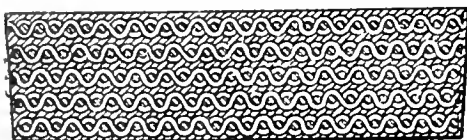
The Combination lawn sprinkler shown in the cut gives not only a full circle but by means of a cut-off the spray can be regulated so as to cover any desired fraction of a circle. When the brass slide is pulled back the usual full circle spray results, and when it is pushed forward a reduced spray is obtained. This is particularly desirable when its use is required near a sidewalk, so that the sprinkler may operate without wetting the sidewalk. This sprinkler is made in iron with brass slide and thumb nut and nickel plated throughout. [W. D. Allen Manufacturing Co., Chicago.]



COMBINATION SPRINKLER.

A FABRIC AND RUBBER HEEL.

MR. CHARLES C. BEEBE, of the B. & R. Rubber Co. (North Brookfield, Massachusetts), is the patentee of a heel or sole that certainly should wear. As shown in the illustration, there is



FABRIC FOR RUBBER HEEL.

almost as much fabric as rubber, the mass being built up of previously frictioned sheets of fabric, died out and cured in molds in the usual manner.

"ADWEAR" DETACHABLE TREAD.

To safeguard against skidding as well as punctures is the purpose of the Adwear detachable tread, and when punctures are mentioned blowouts and rim cutting are included. When applied to a new tire the treads serve as a preventive of these disheartening happenings, and when put on a worn tire its weakness is strengthened and it is sustained for further use. This tread is made of thick, pliable, chrome leather, tanned by a special process, which prevents it from being affected by water. Its toughness, it is said, prevents it from shrinking or hardening under weather conditions. The Adwear steel rivets which stud these treads add to their durability. They are secured to the tire by two rows of patent, double clutch steel hooks which in turn are attached to an endless wire hoop of the strongest iron, along the inside of the tire. They are made in different sizes for all styles of tires. [The Adwear Auto Tire Sleeve Co., North Attleboro, Massachusetts.]



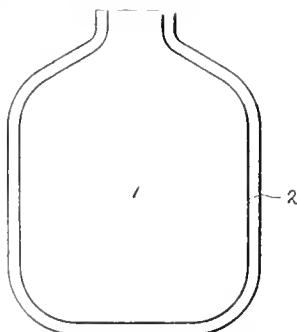
"ADWEAR" DETACHABLE TREAD.

THE DE LONG RUBBER CORSET.

THIS is a new line of goods, covered by patents, the object of which is to reduce the form by stimulating perspiration and thereby reducing fatty tissue. It is pointed out that this induces the free and normal circulation of the blood, leaving the firm, healthy flesh in proper proportions to insure symmetry. [De Long Rubber Corset Co., No. 22 West Twenty-third street, New York.]

NEW METHOD IN WATER BOTTLE MAKING.

ONE of the bright young men in the factory of The B. F. Goodrich Co. (Akron, Ohio) has patented a new process for seaming water bottles and fountain syringe bags. It is simply the dieing out of two sheets of stock, the shape of the bag, one a trifle smaller than the other, putting the lesser upon the greater, and folding and cementing the margin of the greater over the lesser. It looks practical. The inventor is Mr. I. F. Kepler, who has assigned his patent to the Goodrich company. One patent has been granted and others are pending.



NEW METHOD IN WATER BOTTLE MAKING.

THE RUBBER TIRE FIELD.

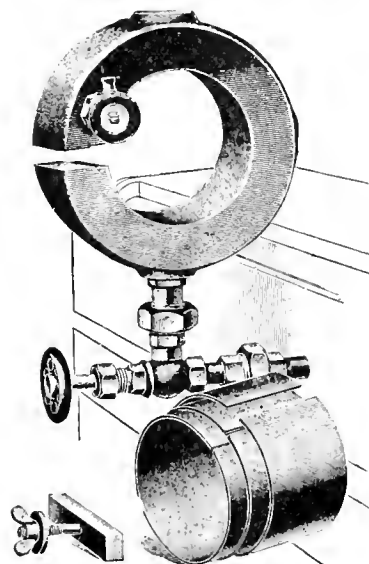
NO SIDE FLANGES, NO WIRES.

AN exceedingly interesting tire is one that is soon to be put upon the market by several of the large tire manufacturers and is known as the American Cellular tire. No, it is not sponge rubber, nor full of pneumatic pockets, nor inflatable rubber balls. It is a solid tire with a flat tread attached to a wheel rim upon which there are no flanges. Instead of retaining flanges there are two interior floating channels so arranged that the resilience of the whole of the tire is taken advantage of. With no base fabric, and no side flanges, the inventor claims that "with 60 per cent. of the usual mass he will carry twice the load" of any tire now in use.

The tires have been tested for some 4,000 miles on commercial vehicles, and on the rear wheels of a Royal Tourist automobile were run from Chicago to New York, the speed at times reaching 45 miles an hour. Of course experts will be slow to believe that anything but an air tire can satisfactorily do the work required by the pleasure vehicle. Leaving that type of vehicle out of the question, therefore, and concentrating on commercial sorts, it would seem as if a most valuable tire had been evolved. The officers of the American Cellular Tire Co., by the way, are men who have been long connected with the rubber trade.

THE "H. F." JOINTLESS TUBE JOINER.

THE tube joints made with the use of the apparatus here illustrated are referred to as being so perfect that in every way the "joins" are invisible when finished. The process employed is described as being so thorough, and the whole treatment of so scientific a nature, that successful tube joining with this tool is assured. Every "join" so treated has the right proportionate strength and elasticity. Joints can be vulcanized completely under this process in 15 minutes. The illustration relates to a vulcanizing mold with interchangeable liners. The vulcanizer is marketed by Harvey Frost & Co., Limited, of London.



"H. F." JOINTLESS TUBE JOINER.

SOLID RUBBER TIRES IN ENGLAND.

MENTION has been made already in these columns of the number of solid rubber tire forms listed by David Moseley & Sons, Limited, of Manchester, as compared with the few standard forms which are supplied in the United States. It is understood that they manufacture 160 different forms. On account of rubber carriage tires in America being molded, for the most part, so many different forms would hardly be practicable, on account of the expense of equipment, while at Manchester such tires are mostly machine made, which of course involves little extra expense for a new pattern.

PFLEUMATIC OR FLEWMATIC!

It is known as "pfleumatic" and from the description is something of the glue and glycerine type that is pumped into the tire under pressure, and is supposed to be as resilient as air and much less likely to escape. When these tire fillers do escape, through overheating, it is not exactly pleasant for the bystanders, who are showered with the viscid mass, but perhaps "pfleumatic" has never yet "flew."

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

ACCORDING to statements made by some of the leading rubber manufacturers in Trenton the rubber trade outlook here, while not particularly rosy at present, seems likely to brighten up within the next few months. Most of the manufacturers take the view that the worst of the financial flurry is over and all that is needed now is a restoration of confidence to get business conditions back to the normal state. It is admitted that this cannot be accomplished all at once, but the general opinion among the Trenton manufacturers seems to be that the recuperating will come surely, though it may come somewhat slowly. By way of summing up a number of interviews it may be stated that the outlook for 1908 in Trenton is for a fair year's business, falling behind the big trade of 1906 and the first half of 1907 probably from 15 to 20 per cent. The Trenton factory owners are facing the situation courageously and are doing their best to aid in rebuilding general business confidence. None of the men interviewed ascribed any cause other than the general financial tightening to the falling off in trade.

A. Boyd Cornell, secretary of the Empire Rubber Manufacturing Co., said: "While things are somewhat dull at present, we believe the general prospects are pretty good. We notice a gradual increase in orders, with no cancellations. We look for a good year, though of course not up to 1907."

Speaking for the Joseph Stokes Rubber Co., H. L. Boyer, general manager, said: "Business is not up to what it should be, but we consider the prospects fair. Dealers throughout the country seem to think the worst of the financial troubles are over. We are getting our share of business and we expect to see trade increase."

Horace M. Royal, of the Home Rubber Co., made this statement: "Prospects are brightening. We notice some improvement in business over that of the past few months. It is not rapid, but it is a gradual increase, and we look for it to continue until trade gets back to its normal level. Trade for 1908 will probably not rise to the standard of the past year or two, but we expect a fairly good year."

"Business is somewhat slack, but the indications are for better conditions," said John S. Broughton, secretary and general manager of the United and Globe Rubber Manufacturing Cos. Mr. Broughton said his factories were running full time, and in the mechanical line, particularly, he thought the prospects for a fair year were good.

William M. Blodgett, secretary and manager of the Hamilton Rubber Manufacturing Co., stated that this factory has orders ahead and none have been lost or cancelled. "We have considerable work on hand," he said, "but at present are running only nine hours as a precautionary measure. We expect to resume ten hours in a short time. Some of our hands are making full time. We regard the general outlook for the year as good."

Louis P. Destribats, factory manager of the Ajax-Grieb Rubber Co., said that while business was somewhat slack his company was hopeful that there would be an improvement soon and that the year would turn out a fairly good one.

William H. Harding, manager of the Union Rubber Co., said there was no good reason now for any continuance of the business slump. He asserted that if merchants and manufacturers would preach confidence good business times would return.

"We are busy," was the greeting of Harry E. Evans, manager of the Consolidated Rubber Co. Mr. Evans thought the business outlook was improving and that the year would yet turn out to be a good one.

* * *

THE Ajax-Grieb Rubber Co. have their additional plant at Trenton under roof and good progress is being made with the

new buildings. The new plant is the result of the consolidation of the Ajax Standard Rubber Co., of New York, with the Grieb Rubber Co., of Trenton, and it is being erected on land acquired on the opposite side of Olden avenue from the old Grieb plant. The new structures are three in number and are solidly constructed of brick. The main building is three stories high and measures 150' x 60 feet. The curing department is one story, 150' x 60 feet, and the engine room is 110' x 40 feet. The new plant will be devoted largely to the manufacture of bicycle and automobile tires, while the old plant will continue to turn out mechanical goods and molded specialties. Much of the machinery is built ready for installation as soon as the buildings are completed. The plant will be operated by a Corliss engine of 700 H.P. Among the new machinery will be 23 hydraulic presses. The new buildings will cost \$33,000.

* * *

THE Home Rubber Co. have added a complete insulated wire manufacturing department to their factory. The new department has been installed in the present buildings, so that no addition was erected. The equipment is the best that could be procured and the installation was attended to with great care, thus placing the company in position to make high grade wire. The capacity of the new department is approximately 100,000 feet of wire a day. Insulated wire of all sizes is being made and all the wire turned out is in accordance with the terms of the "National electric code."

* * *

SEVERAL Trenton rubber manufacturers were re-elected directors of banks in that city at the annual meetings on January 14. Edmund D. Cook, of the Acme Rubber Manufacturing Co. of Trenton, was continued as a director of the Trenton Trust and Safe Deposit Co. and the Mercer Trust Co. John S. Broughton, secretary and general manager of the United and Globe, was re-elected to the directorate of the Mercer Trust Co. Watson H. Linburg, one of the heads of the same company, was chosen again as a director of the First National Bank. A. Crozer Reeves, of the Standard Rubber Co., was continued as a director of the Broad Street National Bank.

HARRY J. STOUT, the wealthy owner of three restaurants in Trenton and an enthusiastic automobilist, has devised a puncture proof appliance for tires. It consists of a series of laminated sections of thin sprung brass, each curved to fit over the inner tube, and all attached to a strip of leather. The pieces of brass overlap each other like fish scales, and, being detached from each other, Mr. Stout claims that the appliance does not affect the resilience of a tire. It is placed between the inner tube and the shoe, and renders the tire puncture proof. Mr. Stout is testing the device on one of his autos, and after further tests states that he will arrange for its manufacture.

* * *

THE United and Globe Rubber Manufacturing Cos. have added a new 500 H.P. Corliss engine to their equipment.

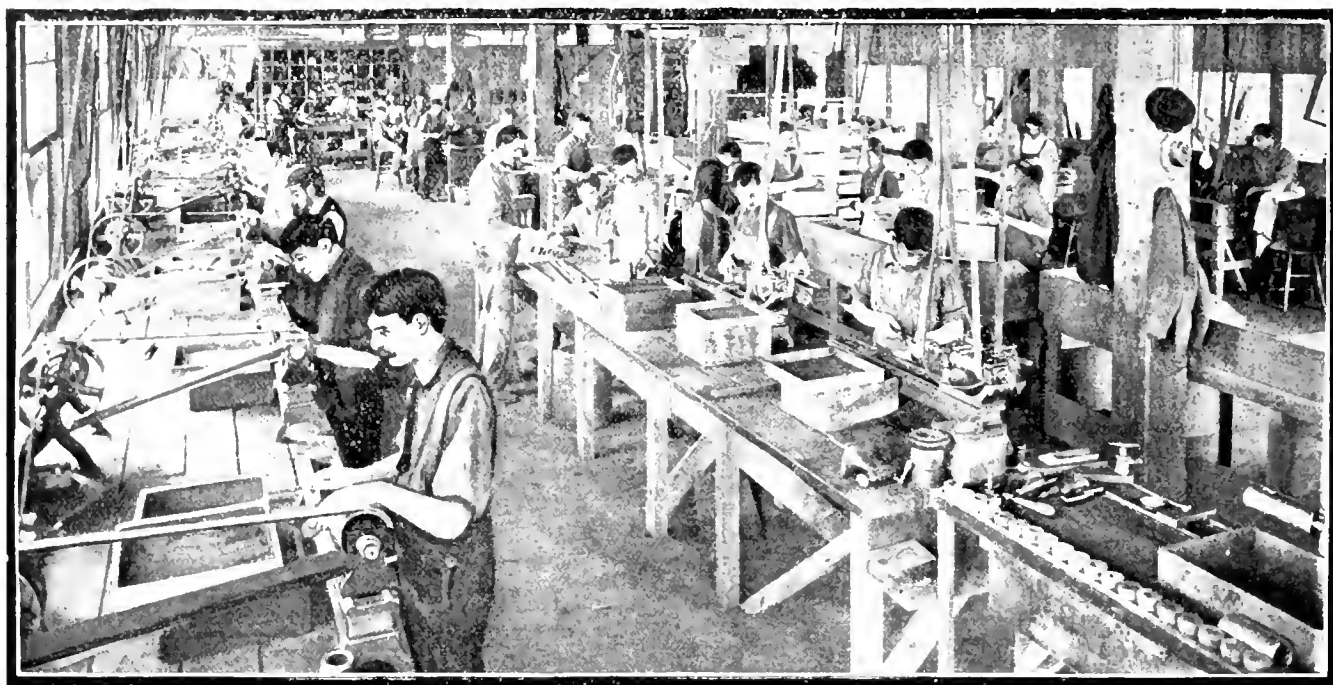
William R. Thropp, manufacturer of rubber machinery, has erected an addition to his machine shops.

Andrew J. Berrien, who for many years has been head book-keeper and estimator for William R. Thropp, manufacturer of rubber machinery, became receiver of taxes of Trenton on January 1. Mr. Berrien was elected for a term of three years.

Quartermaster General C. Edward Murray, of the Empire and Crescent rubber manufacturing companies, has been continued as treasurer of the Republican county committee for this year.

In addition to tires and tubes the Empire Automobile Tire Co. (Trenton, New Jersey), have added insulated wire to their line of products, particularly the "Empire" secondary wire for motor car use.

Mr. Burton R. Parker, formerly advertising manager of The Fisk Rubber Co., has been retained in a similar capacity by The Michelin Tire Co., with headquarters at Milltown.



FACTORY OF THE TYER RUBBER CO.—PORTION OF HARD RUBBER DEPARTMENT.

The Remodelled Tyer Rubber Factory.

THE Tyer Rubber Co., having recently rebuilt and enlarged their plant at Andover, Massachusetts, claim to have one of the most complete and up-to-date factories of any of its line in the world, and while comparisons are apt to be productive of feeling, their claim is strengthened whenever a visitor is taken over the works.

Beginning at the construction end, the buildings are of brick of mill construction, excellently lighted, four stories high, with a street frontage of 232 feet, extending back 256 feet, giving all told 160,000 square feet of floor space.

For equipment, there are two compound condensing engines of the Corliss type, which are 300 HP. and 400 HP. respectively, and these are considerably aided for producing more power by a large condensing pump which maintains 25" vacuum, together with a 45 foot cooling tower. In addition to the engines there are also electric motors for driving some subsidiary machinery and the lighting of the factory is furnished by three dynamos.

For boiler power, 600 HP. is furnished by three Kendall boilers. A reinforced concrete coal pocket, with conveyor, stores the coal close to the fire room. Two cisterns, one with a capacity of 30,000 gallons, the other 90,000 gallons, insure abundant water. For fire, beside the sprinkler system, and the pleasant knowledge that they are protected from loss by The Rubber Manufacturers' Mutual Insurance Co., are two pumps with a capacity of 2,000 gallons per minute, and these, with their own factory brigade that drills every week, together with the regular town fire department, makes it possible to throw 18 streams at once.

From the engines the power goes to the machinery via a fine rope drive. The heavy machinery consists of 4 washers, 12 mixing mills, 3 calenders, 8 tubing machines, 35 dry tumbling barrels, and 3 wet tumbling barrels. Then there is the press room, comprising 17 large knuckle joint presses, by means of which countless molded and mechanical goods are manufactured.

Above the mill room is the cutting room, with its large assortment of dies used for cutting out various patterns to be made up into water bottles, fountain syringes, tobacco pouches, and the like. From the cutting room the visitor is led to the making-up

department, where are tables for 300 girls, occupying the whole second floor of one wing. For lighter power driven machinery, there are 27 hard rubber lathes and a score of buffing machines, two band cutters, dust presses, and many little special casting and finishing departments. To keep all these in repair requires a machine shop, and the visitor finds an excellently equipped one, not only for repair work but for making molds and similar work. In connection with the machine shop, there is a metal room for manufacturing metal pipes and fittings, demanded in the cheaper grade of druggists' sundries. Moreover in this same room are facilities for making up the hard rubber molds, lining bulb shells, and so on. The importance of this metal room is evidenced by the large room given up to it.

Among the most important considerations in a rubber factory are the vulcanizing facilities, and here The Tyer Rubber Co., with their new heaters, are amply provided. The equipment is made up of three bag and water bottle heaters, of 12, 14, and 25 feet, respectively; two hard rubber heaters, 12 and 21 feet, and capable of vulcanizing 18,000 pieces at a time; one bulb heater, 25 feet, with a capacity of 2,000 bulbs; and lastly an 18 foot tube heater. Also of importance are the hard rubber departments and cement dipped goods departments, the latter two occupying buildings detached from the main plant, which they might otherwise menace in case of fire.

The finishing or so called fitting room for assembling and boxing the finished products occupies a large space on the third floor and 75 girls or more are employed. This room has very adequate connection with the two shipping rooms below, by power elevators. Not the least interesting part of the factory is the well equipped laboratory which is under the direct charge of Mr. Henry G. Tyer, who took a chemical course at Harvard University expressly to carry on this work in the Tyer factory.

Of equal importance to this splendid equipment the factory has an efficient force of superintendents and foremen, making it possible to manufacture a line of goods that is known the world over—the "Tyrian"—and which are recognized by the trade as the highest quality of druggists' rubber goods.



FACTORY OF THE TYER RUBBER CO. MAKING-UP ROOM IN DRUGGISTS' SUPPLIES DEPARTMENT

The Obituary Record.

JULIUS W. BRUNN.

JULIUS W. BRUNN, senior member of the firm of Hagemeyer & Brunn, of New York, died on December 30 at the age of 74.

Mr. Brunn was born in Hamburg, Germany, whence he came to New York, establishing himself in business as a commission merchant on August 3, 1858. On June 1, 1859, he associated himself with Mr. F. E. Hagemeyer, founding the firm of Hagemeyer & Brunn, in which he remained a member until his death. Although latterly he was not active in its management, he visited

the office almost daily.

The firm have been connected with the rubber import trade for about 20 years, since their friends, the import house of J. H. Andresen, of Oporto, Portugal, established a branch house in Manãos, which has lately been formed into the Sociedade Anonyme "Armazenas Andresen," now one of the most important houses on the Amazon and the

Besides his business activities Mr. Brunn was connected with some notable charitable institutions in New York city and held honorable positions with the German society and was long vice president of the German Savings Bank of New York. He belonged to the Lincoln Club of Brooklyn and was for 45 years a member of Plymouth church.

ORLANDO C. SMITH.

ORLANDO C. SMITH, of Chicago, one of the most widely known shoe jobbers in the country, died in that city on December 27, in his seventy-first year. He was born at Randolph, New York, May 11, 1827, and removed at an early age with his parents to the northwest, where he became connected with the leather and shoe trades. Later he lived in Toledo, Ohio, where in 1865 he formed the firm of Smith & Simmons, remaining with it until 1890, when he accepted the executive management of Doggett, Basset & Hills Co., prominent shoe jobbers in Chicago, and moved to that city. Two years later the business was reorganized as the Smith - Wallace Shoe Co., with Mr. Smith as president.

Mr. Smith retired from active business in 1905, after having served for six successive terms as president of the Western Shoe



JULIUS W. BRUNN.

second largest receivers at Manãos. Hagemeyer & Brunn's first consignments they used to get from sailing vessels belonging to the Andresen fleet, plying between Portugal, Brazil, and New York. They further represent the well known Pará house of Pires Teixeira & Co., from whom they receive Islands qualities.



ORLANDO C. SMITH.

Wholesalers' Association. He was also at one time vice president of the National Shoe Wholesalers' Association of the United States. These positions brought Mr. Smith very prominently before the trade. As is well known, the existence of these associations is due largely to questions connected with the distribution of rubber footwear, a class of goods which Mr. Smith's own house handled very largely. The funeral at Toledo, Ohio, on December 29, was attended by many members of the trade from Chicago, and appropriate resolutions were adopted by the Western Association of Shoe Wholesalers.

DR. PETER T. AUSTEN.

PETER TOWNSEND AUSTEN, PH.D., one of the best known chemists in the United States, died suddenly at his home in New York on December 30, after an illness of several months, at the age of 55 years. After being graduated from the Columbia School of Mines in 1872, Mr. Austen went to Germany and studied for several years at the University of Berlin and with some eminent chemists. He was successively instructor of chemistry in Dartmouth College, professor of chemistry at Rutgers, and head of the chemistry department of the Brooklyn Institute. Later he devoted himself to consulting work with marked success. During his career he was called upon very often to solve problems connected with the rubber industry. Dr. Austen was a member of most of the important chemical societies of the world.

* * *

THE many friends in the trade, and out of the trade as well, of Mr. George E. Hall, general manager of the Boston Woven Hose and Rubber Co., will learn with deep regret of the death, on January 25, of his wife. The funeral occurred on Monday afternoon, January 27, at which time all the offices, jobbing houses, and the factory of the company were closed.

A STARTLING TIRE SUGGESTION.

THE newspapers *Le Matin*, of Paris, and the New York *Times*, which are responsible for the New York to Paris (via Alaska) automobile run, are giving much advice to contestants, as to clothing, equipment, and especially as to tires. One thing that both papers insist upon will fill the rubber trade with panic. To quote:

"All pneumatics should be vulcanized in order to resist the great cold."

No doubt the writer of these words was convinced that an automobile tire to stand an arctic climate should not be made by the ordinary process of melting the gum, pouring it upon the fabric, and blowing upon its surface until it hardened. He probably really believes that the invention of Goodyear that covered the use of sulphur and heat should now be employed. But does he appreciate what it costs to change processes in the great rubber factories of the world? To carry out his suggestion, the melting pots must be cast aside and each factory must become equipped with washers, dryers, mixers, calenders, making up forms, and last of all, expensive vulcanizers or presses—an investment of hundreds of thousands of dollars.

And just to cross Alaska and Siberia! It would hardly seem worth the while. The tires now in use, which by his inference are unvulcanized, are good enough. But vulcanized tires—absurd.

TIRE CHAINS VERSUS STUDS.

THE new regulation in New York, prohibiting the use of tire chains on automobiles going through any of the city parks or over any roads under the control of the park commissioners, called forth an exceptional number of complaints during the recent heavy snowfall. Not a few experienced drivers and professional chauffeurs declare that steel studded tire casings are not as good for running through heavy snow as tire chains

are, though many of them consider that the steel studs, especially those on foreign tires, are all right for preventing skidding on icy or slippery pavements.

When running through snow with steel studded tire casings the snow generally cakes between the studs, so that after a time the tread practically becomes a smooth one on account of the caked snow and ice which surrounds the studs. With tire chains this is impossible, as there is too much space between the chains that span the tires. The tire chains are much better for driving through snow, as they grip the snow at the sides of the tire as well as where the tire rests on the surface of the ground.

NINE YEARS OF AUTOMOBILE PROGRESS.

IT is just nine years since THE INDIA RUBBER WORLD, in connection with an effort to keep its readers informed in regard to the development of the then new automobile interest, printed a communication from a firm mentioned at the time as "one of the most important companies in the field," who wrote that "it would not be an extravagant estimate to say that probably 200 more vehicles, similar to those now in use [in New York city] will be constructed this year." The letter referred to closed with these words:

It is perfectly safe to assume that the motor vehicle industry has come to stay and that, while its development will be slow at first, it will increase with gigantic strides, and evidently to the great advantage of the rubber business.

Whether or not the motor vehicle industry "has come to stay," no one will dispute that it has increased "with gigantic strides," and "evidently to the great advantage of the rubber business." It must be admitted, however, that THE INDIA RUBBER WORLD's informants in 1899 were more successful as prophets than in the industrial field, as they long ago ceased to figure in the automobile world.

It may not be out of the way here to add that when, during the latter part of 1899, a member of THE INDIA RUBBER WORLD staff was in Germany, the director of one of the largest rubber manufacturing companies in that country assured him: "We don't believe that the future of the automobile industry will be of much interest to the German rubber trade. Perhaps the commercial motor vehicle will become important and this may call for solid rubber tires somewhat, but we cannot see any prospective large demand for rubber tires of any class for pleasure vehicles of the self propelling type." It may be added that the company whose director is quoted here have now become very important producers of pneumatic tires for vehicles, for both the domestic and export trade. Not only this, but Germany to-day is manufacturing the *Personenmotorwagen* in large numbers, not only for home use, but likewise for export to North and South America, every country in Europe, and to Asia and Africa.

RUBBER MONOPOLY IN NICARAGUA.

THE organization is reported of the Atlantic Industrial Co., with headquarters at Managua, Nicaragua, with a capital of \$300,000 (gold), to control the extraction of rubber from the government forests in that republic. The new company will operate under lease certain concessions granted by the government to a number of individuals in the past. The rubber collected under these concessions is exported mainly through San Juan del Norte, and the United States consul at that port estimates that the quantity will reach 500,000 pounds this year.

THE president of Brazil has signed a decree authorizing the operation in that republic of the \$11,000,000 company incorporated in Maine (United States) to construct the proposed Madeira-Mamoré railway. Alexander Mackenzie is the accredited representative of the company in Brazil.

THE RUBBER TRADE AT SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

ONE of the good indications that point to a good year for the rubber business on the Pacific coast is the manner in which the season's rains are coming. It is not a flood of rain for one week and then two or three weeks without a drop, but there is a rain every week, and of the gentle and continuing kind, that does real good. Throughout the country districts the hopes of the farmers have been raised and they are looking forward to a favorable year, and the merchants in the interior towns, encouraged by the confidence of the farmers, are beginning to make purchases, whereas heretofore they have been letting their stocks run very low. The rubber establishments in San Francisco have been to a large extent holding their traveling men back during the quiet times, but those who have sent their men out through the interior are getting good results. From points as far south as Los Angeles, through the northern sections of the coast territory merchants are getting more liberal in their orders and show signs of getting back to their old buying capacity. In San Francisco the report from all of the rubber houses is that judging from all indications, business conditions will be normal again in a month or two. Collections are still quiet in some lines, but as a general rule they are getting easier every week.

The branch establishment of the Revere Rubber Co. (Boston) in San Francisco, located on Mission street, between First and Second, was destroyed by fire a fortnight ago, and the stock consumed. The stock, however, was covered by insurance. Telegrams were in at headquarters for stock to take the place of that destroyed as soon as the fire was over, and Mr. A. T. Dunbar, the local agent, was soon ready to receive it and go on with business at a location which he has taken at No. 507 Mission street. This firm has been doing a very active business on the coast.

The Pacific Coast Rubber Co. are moving from the temporary quarters in which they have been compelled to do business since the big fire, to their new quarters at No. 416 Mission street, in a massive reinforced concrete building just completed. The new store has a large balcony running around both sides, and in front the office fixtures have been built with elaborate finish and beauty. It is noticeable that the rubber merchants, as other merchants in San Francisco, in spite of the talk of quiet times and adversity, are all moving into more elaborate and more substantial quarters than they occupied before the fire.

Barton-Squires-Byrne, Inc., report that they have just received their two additional hydraulic presses and rubber mill machinery and are now installing it, and will soon have that new part of the plant in active operation. R. J. McNeilly, sales manager, reports that market conditions are showing gradual improvement, and the outlook is good.

The Gorham Rubber Co. have everything in running order now at the big new store on Fremont street, between Market and Mission, and all departments are reported to be busy. Mr. Gorham states that he expects trade to get back to about normal by next April. The outlook for a big business, he states, is excellent.

Mr. Grant, formerly with the Gorham Rubber Co., and more recently with the Pennsylvania Rubber Co., is back again with the Gorham.

The Sterling Rubber Co. report that business has so improved that it can be called good now, in comparison to what it was a month ago. Collections have greatly improved. Salesmen who have started through the interior of the state have been much encouraged by the good orders they have secured, and the trend seems to be for a gradual resumption of normal conditions.

L. L. Torrey, of the Pennsylvania Rubber Co., is satisfied with the way matters are developing in money and commercial matters on the coast. "People are a little more conservative than they used to be," he said, "but that is a good thing. Business is picking up and collections are getting better. Conditions are unquestionably improving."

R. H. Pease, of the Goodyear Rubber Co., reports cheerfully on the general conditions for the rubber business. "We enjoyed a successful business for last year," he said. "It was one of the best years in our business. We expect to get into the new building which we are erecting some time in May. That will place us in the same location which we have occupied for nearly 40 years." Mr. Pease will go to Portland to visit the northern branch for some 10 days, and after his return, about the middle of February, will go on to New York.

Both Mr. Kanzer and Mr. Ralph, of the Phoenix Rubber Co., report that the rubber business is showing steady improvement and that although it is still quiet as a result of the money scare, improvement is noticeable everywhere.

POPULARITY OF THE RUBBER PEDAL.

WHILE it is hardly likely that the rubber pedal will oust its old rival, the "rat trap," as it once was ousted, that it is due for a considerable measure of renewed popularity appears certain. It is due to the demand of the motorcyclists that the rubber pedal has made its reappearance and that it has met with a warm and general welcome is evident. Practically every motorcycle manufacturer has been quick to adopt it. There also already has developed an appreciable demand on the part of riders of motorless bicycles and it is reasonable to suppose that this demand will be enlarged with the return of the outdoor season.

Abroad the rubber pedal never lost its vogue and its extinction in this country was largely assisted by the craze for lightness. The rat trap has obtained a hold that is too secure to be easily shaken, but granted only that the rubber blocks are not too small or too hard, there are those who will find in the rubber pedal a grateful comfort that is not to be denied and that will add somewhat to the pleasure of cycling. He is a wise dealer who stocks a few pairs of the pedals and calls the attention of his patrons to them.—*The Bicycling World*.

BORING IN THE EARTH FOR RUBBER.

THE commissioner of public works of Tacoma, Washington, according to the local newspapers, believes there has been something akin to an india-rubber tree forest buried 200 to 300 feet below the surface of the earth on the wide stretch of prairie land south of that city.

The force of men who are boring a 1,000 foot well for the city have run into this rubber-like stratum of earth, and the commissioner has gone out to the well several times to investigate the formation. The earth, or mud, it is asserted by local authorities, is black in color and of the consistency of gluey rubber before it is tempered for commercial purposes. It will stretch with about an equal elasticity of crude rubber, and it is a hard task to punch a hole through or cut it.

For weeks it has been the despair of the well borers, as the sugar would scarcely make an impression upon it, and kept "slogging." The commissioner believes it may be a vegetable formation commingled with silt washed down by rivers to some prehistoric sea, which aeons ago was covered through some subterranean cataclysm by the gravel and sand composing the prairies.

THE electrical equipment of the *Maurctania*, the newest ship of the Cunard line, embraces nearly 100 tons of insulated wires, with a length of some 250 miles.

RUBBER PLANTATION TOPICS.

HOW WIDE APART TO PLANT?

THE subject of wide versus close planting of *Hevea* rubber in the Far East continues to be discussed in *The Financier* (London). It may be, says our contemporary, that in parts of Ceylon and Malaya *Hevea Brasiliensis* will mature on the lines of the giant forest trees found in the Amazon basin, while in other districts development may (from causes of which little or no knowledge now exists) develop sufficient dimensions to admit of successful tapping, and fail, after say 10 or 12 years, to increase to any great extent in girth.

In other words, a new variety of *Hevea*, peculiar to certain districts in the East, may be evolved, which, while yielding a few pounds of good rubber each year, will cease to increase in size to an extent, at any rate, which would not only render planting up to 180 trees to the acre permissible, but, from the profit earning point of view, eminently desirable. But if the *Hevea* retains in the East all of its characteristics in the Amazon valley, it is not easy to see how the close planting theory will work out profitably in practice.

Many of the most experienced planters, says *The Financier*, are now advocates of wide, or, at any rate, less close planting, and their change of opinion has not been brought about by any other means than a study of the conditions which are likely to achieve the best results from their labors. *Hevea* trees planted 24 x 20 feet, or even 20 x 17 feet, have, as Mr. Carruthers pointed out in his 1906 report on Federated Malay States agriculture, chances which are denied those planted 15 x 15 feet or closer. They are bound to get the benefit of sunlight all over the ground; when matured they are easier to work; and at all times the dangers from disease are lessened.

On the whole, there seems very little to be said in favor of close planting, for even if the trees, as already suggested, might prove in some districts to be permanently smaller than those on the Amazon, the increased ease in working the avenue system and decreased risk from loss through disease are at least two factors which seem to *The Financier's* writer of outstanding importance.

PRICES OF PLANTING SHARES.

In reporting on the rubber plantation share market for 1907, J. Russell Grant & Co. (London) say that it was only natural that prices of shares should have shrunk toward the end of the year, with the decline in the selling prices of rubber. The marvel, they say, is not that share values should have fallen, but that they did not go lower. They regard current prices as justified, however, and remark: "With rubber at 2 shillings per pound practically all the wild rubber at present available would be sold at a heavy loss, while plantation rubber could be sold at a very considerable profit."

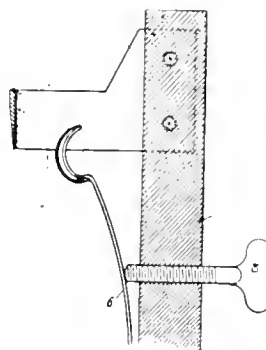
THE COMING LONDON RUBBER EXHIBITION.

A PRELIMINARY prospectus has been issued of a Rubber and Allied Trades' Exhibition, to be held in London on September 21-26 next. The object is to direct attention to the great advances made in recent years in the various branches of the rubber interest, and of enabling the planter and dealer in the raw product to coöperate with the manufacturer in this projected education of the public. Provision will be made for the exhibition of raw rubber of every kind—even the so-called rubber product of the Colorado "rabbit weed"—and by means of lectures those who attend the exhibition will be given an idea of the difference between the various sorts and the distinctive qualities of each. Incidentally all the mechanical and other appliances for the preparation of crude rubber, whether on plantations or in the forest, will be on exhibition, and their uses explained. The machines and apparatus used in the rubber factory likewise will be shown, together with an extensive collection of manufactured goods into which rubber enters. The catalogue of intended exhibits provides for "india-rubber substitutes," and it is to be

hoped that a niche will be reserved also for "synthetic rubber"—if any can be found—in order that the public may have a fair opportunity to see how far their alarm at this bugaboo has been justified. The committees in charge embrace names identified with the rubber industry, planting, tropic commerce, colonial development, and so on—a list which guarantees the *bona fides* of the undertaking. The organizing manager is A. Staines Manders, 75 Chancery lane, Holborn, W. C., London.

TWO NEW RUBBER TAPPING TOOLS.

WHAT is said to be the best tool yet for tapping the *Castilloa* rubber tree has been already described in *THE INDIA RUBBER*



LESHER'S TAPPING TOOL.

WORLD (April 1, 1907—page 219). The cut used at that time, however, did not show the details satisfactorily. The present illustration, taken from the patent specifications, which shows all but the handle of the tool, is so self descriptive that it tells its own story. The knife is the invention of Mr. Charles A. Leshner, of La Zucualpa Rubber Plantation Co., in Mexico.

* * *

THE "Secure" rubber tapping knife is referred to as cutting either pulling or pushing, and as being capable of being adapted according to the thickness of the bark to be tapped. As will be seen from the illustration, the blade is joined to the circular base by means of a bolt, and fitted so as to



THE "SECURE" TAPPING KNIFE.

rotate in a slide to any angle required. The circular base and disc is toothed, and securely locks in any position. The pin has a square shoulder to prevent turning, and the shank is riveted in the handle.

MALAYSIAN PLANTERS TO ECONOMIZE.

THE United Planters' Association in the Federated Malay States, which had contributed so much to the development of the rubber culture there, was formally dissolved at a meeting held at Kuala Lumpur on December 1, immediately after which a larger organization was formed, under the name Planters' Association of Malaya. It is intended to embrace members not only from the Federated States, but from the whole Malay peninsula. The headquarters and offices are to be at Kuala Lumpur. R. W. Harrison, chairman, and H. C. E. Zacharias, secretary, of the old association were elected to like positions in the new, to serve until the first annual meeting, in April. The association is expected to deal actively with the question of importing labor, and at the meeting above referred to it was pointed out that a necessary study was the reduction of plantation expenses. If rubber fell much lower the situation would be serious, for already the outcry at home [in England] against expenditure was extreme. Wages are higher in Malaya than Ceylon, one speaker claiming that the latter had an advantage of about 25 per cent. The meeting was attended by 30 planters, representing eleven local associations.

RUBBER PLANTERS OF MEXICO.

MR. WILLIAM VERNON BACKUS, of Mexico City, who presided at the recent meeting at which was organized the Rubber Planters' Association of Mexico, and to whom was delegated the selection of a secretary, notifies the appointment of Mr. William A. Jones, of Mexico City, to that position. The first regular meeting of the association is scheduled for February 12.

News of The American Rubber Goods Trade.

UNITED STATES RUBBER CO.—DIVIDENDS.

THE board of directors of the United States Rubber Co., on January 2, declared the regular quarterly dividend of 2 per cent. upon the first preferred stock and the regular quarterly dividend of $1\frac{1}{2}$ per cent. upon the second preferred stock, for the quarter beginning October 1, 1907, from the net earnings of the company for the fiscal year beginning April 1, 1907, the dividends being payable January 31, to shareholders of record January 15. The net earnings for the nine months (December partially estimated) are reported at approximately \$3,240,000, including dividends of \$583,108.75 received upon the stock of the Rubber Goods Manufacturing Co. in the company's treasury. The earnings reported for the corresponding period one year ago amounted to \$3,206,176, including \$552,247 of Rubber Goods dividends.

GEORGE A. ALDEN & CO. REORGANIZED.

THE copartnership existing between Messrs. George A. Alden, Adelbert H. Alden, and Arthur W. Stedman, under the firm name of George A. Alden & Co., in Boston, having expired by limitation on December 31, a new copartnership has been formed under the name and style of George A. Alden & Co., composed of Messrs. Adelbert H. Alden, Arthur W. Stedman, G. Edwin Alden, Fred W. Dunbar and J. Frank Dunbar, for the purpose of continuing the business. The present firm style was adopted in 1878, but the business of importing india-rubber was established by the late George A. Alden as early as 1855, and has been continued since without intermission. Adelbert H. Alden, a son of the founder, became a member of the firm in 1878; Mr. Stedman, after several years of connection with the house, became a partner in 1898; G. E. Alden is a younger son of the founder, and the Messrs. Dunbar have been employes of the house for a number of years.

A RUBBER TIRE SUIT—DECISION AND APPEAL.

IN *re* Boston Woven Hose and Rubber Co. v. Pennsylvania Rubber Co., a suit for infringement of United States Patent No. 466,577 (for a pneumatic tire), issued January 5, 1892, to Frederick Schrader, of Philadelphia, in the United States circuit court for the district of Massachusetts, a decision has been filed in favor of the defendant. The Schrader patent, which was illustrated in THE INDIA RUBBER WORLD June 1, 1907 (page 290), will expire January 5, 1909. The court holds that the defendant is not using an invention made by Schrader and that Schrader did not anticipate in any degree the principle of the modern pneumatic ("clincher") tire. The decision in the above case was rendered by Judge Brown on November 14 last. Appeal papers have been prepared and the record on appeal entered in the United States circuit court of appeals on or about December 30, 1907.

MATTSON RUBBER CO.—INCREASE OF CAPITAL.

THE Mattson Rubber Co., incorporated under the laws of New York, have increased their capital stock from \$100,000 to \$150,000, the increase being issued in preferred shares. The company during the past year bought an extensive plant at Lodi, New Jersey, and having ample facilities for enlarging their business it was decided to make this increase of capital in order to take advantage of them. It was understood that their business has been very prosperous notwithstanding the fact that they were considerably upset by their fire at Bellevilles in April last. In order to avoid a similar occurrence as much as possible a very complete automatic fire sprinkler system has been installed throughout their new plant and office buildings, together with other fire fighting appliances. The Mattson company make druggists' sundries.

MR. ANDRUS LEAVES LA CROSSE.

MR. GEORGE S. ANDRUS, one of the founders of the La Crosse Rubber Mills Co. (La Crosse, Wisconsin) and from the beginning its general manager, has withdrawn from the company. Just what his plans are he does not divulge, except that before he takes hold of anything he is going to take a vacation, something that he has not done in ten years.

LOANDO HARD RUBBER CO.—CHANGE OF NAME.

THE company at Boonton, New Jersey, which existed for a number of years as the Loando Hard Rubber Co. has been reorganized, involving a change of corporation style to Boonton Rubber Co. Charles Brock is president; R. A. Anthony, treasurer; and R. W. Seabury, secretary. A. Hall Berry is sales agent, with headquarters at No. 27 Warren street, New York, and a London office is maintained at 12 Manchester avenue, E. C. Besides continuing to make a high grade of reclaimed rubber suitable for hard rubber goods requiring a low ash test, the Boonton company make a full line of insulating materials.

THE FISK RUBBER CO'S ANNUAL.

THE annual meeting of shareholders of The Fisk Rubber Co. (Chicopee Falls, Massachusetts) was held on December 16, when the old board was continued in office, after which the officers of the company were reelected as follows: Harry T. Dunn, president; Harry G. Fisk, secretary; and Alfred N. Mayo, treasurer.

THE PEERLESS COMPANY'S NEW YORK STORE.

THE Peerless Rubber Manufacturing Co. (New York) have recently opened their new retail department at No. 88 Chambers street, which connects with their long established store at No. 16 Warren street. Owing to their somewhat limited space they have not been able to carry a large stock, but with the additional store, they will always have on hand a full and complete line of mechanical rubber goods to fill immediate demands.

THE "M. R." HYDROCARBON.

GEORGE A. ALDEN & Co. (Boston) are out with a circular letter in which they state in dignified terms their position as manufacturers and marketers of "M. R." hydrocarbon. In the first place they control the United States patents for its manufacture. The product is made from an exceedingly pure but intractable natural hydrocarbon of the elaterite series, for a long time useless because of its intractability, it was finally fluxed by the use of a special solvent, the base of which is heavy, high grade, Kansas oil. The discovery of this fluxing process is the subject of patents controlled by Messrs. Alden & Co. They made a contract with a certain company to manufacture this for a time, but at the expiration of that contract gave the work to another company. The quality of their M R has never been changed and they are the only company in the United States who are able to supply it.

NEW INCORPORATIONS.

Two corporations formed December 27, 1907, under the laws of Massachusetts, are the Malden Rubber Co. and the Melrose Rubber Co., each with \$5000 capital, all issued for cash. The incorporators in each case are Major Harry P. Ballard (assistant treasurer of the Boston Rubber Shoe Co.); George L. Huntress, of Winchester, Mass.; and Charles E. Dow, of Boston. It is understood that the corporations will not be active but have been organized merely to protect certain trade names used by the Boston Rubber Shoe Co., and have been capitalized at the lowest figure possible under the Massachusetts laws.

Dissolvane Co., December 24, 1907, under the laws of New York state; capital, \$10,000. Incorporators: Horace G. Stripe, No. 220 Broadway, New York; Paul C. Haan, Midland Park, New Jersey; and Lillian L. Steurer, Brooklyn, N. Y. To con-

tinued the business of dealing in rubber garments for reducing flesh, and various toilet articles.

The Eastern Flexible Conduit Co., September 21, 1907, under the laws of New York; capital \$20,000. To manufacture and sell flexible conduits, rubber tape, and pitch tape. Directors: Eugene T. Trotter (No. 276 Quiney street), A. P. Hinsky, and S. H. Smith, all of Brooklyn, N. Y.

National Waterproof Co., December 6, 1907, under the laws of Illinois; capital \$250,000. Incorporators: J. A. Kemper, Frank A. T. Trotter, and P. E. Coate. Business office stated: 1120 First National Bank building, Chicago.

Congo Brazilian Crude Rubber Co., December 17, 1907, under the laws of New Jersey; authorized capital \$500,000. Incorporators: Charles N. King, Jr., George H. Russell, and Frank A. Van Winkle. Principal office in New Jersey, No. 243 Washington street, Jersey City, N. J. and the agent in charge, New Jersey Corporations Agency.

The Solvini Auto Horn and Tubing Co., December 19, 1907, under the laws of New York; capital \$30,000. Incorporators: Salvatore Solvini, No. 402 East One Hundred and Sixteenth street, New York; G. Brunelli, New York, and A. Casazza, Brooklyn, N. Y.

Pneumatic Heel Cushion Co., January 11, 1908, under the laws of New Jersey; capital, \$100,000. Incorporators: William L. Gordon, Milan Ross, and Joseph G. Coleman, all of No. 213 First avenue, Asbury Park, N. J.

NEW ENGLAND RUBBER CLUB.

The New England Rubber Club are to be congratulated upon having secured Governor Hughes, of New York state, as a speaker at their next dinner. The date, March 10, is a little late, but the distinguished visitor's list of dates was full, and overfull, up to that time. The members of the Club have to thank Mr. E. E. Wadbrook for his faith that Governor Hughes could be induced to attend, if only the invitation was extended in a convincing manner. He therefore journeyed to Albany, interviewed the governor, incidentally becoming an admiring "Hughes man," and succeeded.

TRADE NEWS NOTES.

The Hartford Rubber Works Co. have discontinued their New York branch at No. 88 Chambers street, and will concentrate their business in this city at their more recently organized branch at Broadway and Fifty-seventh street. Hartford goods will be kept in stock downtown, however, by Charles E. Miller, at No. 97 Reade street.

The Sweet Tire and Rubber Co. (Batavia, New York), who have been engaged hitherto in making solid tires, are reported to be installing a plant for the manufacture of pneumatic tires for bicycles and automobiles.

Edward A. Rickitts, many years ago superintendent of the Davidson Rubber Co. (Charlestown, Massachusetts), has returned to his first love and is again superintendent of the same factory.

The Sterling Manufacturing Co. (Gloucester, Massachusetts) are putting on the market three grades of substitutes, samples of which sent to THE INDIA RUBBER WORLD office appear to be excellent. They sell by number, No. 2 being used in mold work, No. 10 in carriage cloth, and No. 67 in proofing.

Mr. Arthur E. Friswell, who recently returned from England on account of the death of his father, has determined to remain in America in connection with the settlement of the latter's estate. Mr. Friswell has made an exceptional record in the rubber tire industry. He was first with the Mechanical Fabric Co., going to the Hartford Rubber Works Co. when they took over the Fabric company's tire department. Later Mr. Friswell became connected with Messrs. David Moseley & Sons, Limited, of Manchester, England, where it is understood he did remarkably good work in the tire branch.

THE RUBBER TRADE IN CANADA.

For the past two months weather conditions in the Dominion have been such as to encourage both wholesalers and retailers of rubber footwear. Manufacturers have been kept fairly busy, and in some cases behind in their orders. The winter began with a heavy fall of snow, which was favorable to the rubber trade, and the mild weather which set in accompanied with showery periods proved no less so. *The Canadian Shoe and Leather Journal* points out that whereas many retailers find their rubber trade profitable, there are large numbers who still seem to regard the sale of rubbers as a side issue and who use cheap prices in this line as the means of advertising their general business. In some towns a fixed price list has been adhered to throughout the season with reported satisfactory results.

Fisk Limited (Montreal, Quebec), manufacturers of leather and shoe goods, and who have a rubber cement factory at Lachine, are understood to have an excellent business in the latter line, with a very encouraging outlook for the coming year.

The Canadian Roomer & Boschert Press Co. are turning out at their plant in Montreal a full line of presses, such as are made by the present concern at Syracuse, New York, including the designs intended especially for rubber factory use.

TRADE NEWS NOTES.

The Viscoloid Co., whose office and factory are in Lancaster street, Leominster, Massachusetts, manufacture a composition which they call "Viscoloid" and describe as being a material similar to celluloid.

The Wire and Telephone Co. of America (Rome, New York) have appointed the Besco Supply Co., of Birmingham, Alabama, their agents for the South, and supplied them with a stock of bare and rubber covered wires and telephone apparatus.

The annual meeting of The Middle States Shoe Wholesalers' Association is scheduled for Philadelphia on February 20.

A note in a local newspaper regarding the intended removal of the factory of the Bourn Rubber Co. (Providence, Rhode Island), related only to a small building at Cranston used by the company for making oil varnish, at some distance from the regular plant, as is the rule with most of the rubber factories.

The Eureka Fire Hose Co. (No. 13 Barclay street, New York), advise that Mr. Henry H. Cypher has severed his connection with them.

The employes of the B. & R. Rubber Co. (Northfield, Massachusetts), have organized the "B. & R." hose company, which has been supplied with equipment for protecting the plant against fire.

At the annual meeting of the New England Shoe Wholesalers' Association, held in Boston on December 11, the following officers were elected: George T. Howard (Batchelder & Lincoln Co., Boston), president; William A. Pickett (Hosmer-Codding Co., Boston), vice president and treasurer. George C. Houghton, No. 166 Essex street, Boston, was reelected secretary. The executive committee consists of Messrs. Howard and Pickett; A. S. Foster and W. F. Mayo, of Boston; and C. A. Blodgett, Springfield, Mass.

Alexander Macpherson has retired from the position of manager of the mechanical goods department of The Gutta Percha and Rubber Manufacturing Co., of Toronto, Limited, which he had filled for a number of years.

Mr. Frederick W. Dunbar, vice president of the New York Commercial Co., has been elected a director of the Aetna National Bank of New York.

The Waterbury Co. (of New Jersey), the regular quarterly dividend of 2 per cent. on the preferred shares and a quarterly dividend of 1¼ per cent. on the common, payable February 1. The Waterbury Co. (of West Virginia) a quarterly dividend of one-half of 1 per cent., on February 1.

UNITED STATES RUBBER CO'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending January 25:

COMMON STOCK.

Week	Dec. 28	Sales	710 shares	High	21	Low	20
Week	Jan. 4	Sales	1,310 shares	High	20 $\frac{7}{8}$	Low	20
Week	Jan. 11	Sales	5,050 shares	High	24 $\frac{3}{4}$	Low	21
Week	Jan. 18	Sales	3,345 shares	High	26	Low	23
Week	Jan. 25	Sales	1,810 shares	High	24	Low	22

For the year—High, 26, Jan. 14; Low, 20, Jan. 2.

Last year—High, 52 $\frac{1}{2}$; Low, 13 $\frac{1}{2}$.

Sales during 1907—175,277 shares.

FIRST PREFERRED STOCK.

Week	Dec. 28	Sales	510 shares	High	77 $\frac{1}{2}$	Low	74 $\frac{1}{2}$
Week	Jan. 4	Sales	658 shares	High	79 $\frac{1}{2}$	Low	77
Week	Jan. 11	Sales	3,940 shares	High	88 $\frac{1}{2}$	Low	80
Week	Jan. 18	Sales	2,804 shares	High	88 $\frac{1}{2}$	Low	83
Week	Jan. 25	Sales	1,475 shares	High	82	Low	80

For the year—High, 88 $\frac{1}{2}$, Jan. 9; Low, 77, Jan. 2.

Last year—High, 109 $\frac{7}{8}$; Low, 61 $\frac{1}{4}$.

Sales during 1907—120,108 shares.

SECOND PREFERRED STOCK.

Week	Dec. 28	Sales	10 shares	High	50	Low	50
Week	Jan. 4	Sales	460 shares	High	49 $\frac{1}{4}$	Low	46 $\frac{1}{2}$
Week	Jan. 11	Sales	2,340 shares	High	60	Low	49 $\frac{3}{8}$
Week	Jan. 18	Sales	320 shares	High	60	Low	50
Week	Jan. 25	Sales	100 shares	High	61 $\frac{1}{4}$	Low	61 $\frac{1}{4}$

For the year—High, 61 $\frac{1}{4}$, Jan. 23; Low, 46 $\frac{1}{2}$, Jan. 2.

Last year—High, 78 $\frac{1}{8}$; Low, 30.

Sales during 1907—31,203 shares.

DIVIDENDS DECLARED.

AMERICAN Chicle Co., regular quarterly dividend of 1 $\frac{1}{2}$ per cent. on the preferred stock, payable January 2; regular monthly dividend of 1 per cent. on the common stock, payable January 20; and a special dividend of 1 per cent. on January 20.

The United Shoe Machinery Co. paid on January 5 a dividend of 2 per cent. on their common and 1 $\frac{1}{2}$ per cent. on the preferred stock. The company have practically consolidated their manufacturing at the Beverly (Massachusetts) plant.

The fifth regular quarterly dividend of 1 $\frac{3}{4}$ per cent. on the preferred shares of the Canadian Consolidated Rubber Co., Limited, was payable January 1.

EUREKA FIRE HOSE CO.—CHANGE OF NAME.

At a meeting of the shareholders of the Eureka Fire Hose Co. (New York), held on January 20, it was resolved unanimously to change the corporate name of the company to Eureka Fire Hose Manufacturing Co. The Eureka company was incorporated in 1875 and its development to its present very large dimensions has been a measure of progress generally in the art of fire hose manufacture.

NEWS OF THE RUBBER SHOE FACTORIES.

WORK was resumed at the factory of the National India Rubber Co. (Bristol, Rhode Island), on Monday, January 6, after a shut-down lasting about three weeks. On the same date the boot factory of the Woonsocket Rubber Co. at Millville started work again. The company's "Alice" mill, at Woonsocket, has been running since December 30, having been closed only four days, for the holidays. It is reported that the Fells factory of the Boston Rubber Shoe Co., which has been closed since December, will reopen on February 3, and the factory of the Goodyear's Metallic Rubber Shoe Co., at Nantucket, on February 10.

MR. APSLEY ON BUSINESS CONDITIONS.

In an interview given to a local newspaper the Hon. L. D. Apsley, president of the Apsley Rubber Co. (Hudson, Massachusetts), said that when the company's plant was closed temporarily a few weeks ago, it was not on account of any pressing business condition, but as a precautionary measure. After an expose had been made of certain matters connected with the banking world, gossip about which had led to a shaking of confidence, the legitimate business of the country was found to be in an unusually sound condition.

"The Apsley Rubber Co.," said President Apsley, "has done the largest business during the past year that it has ever done. The profits have been remunerative, collections have been good and the losses have been absolutely little or nothing. A settlement of 60 per cent. on a bill of \$700 is all. This is most remarkable in doing business of between two and three millions, and I firmly believe that it reflects the sound condition of business houses generally throughout the country. Believing that the financial storm is blowing over and that conditions are as stated, we are again running on full time."

1908 CALENDARS RECEIVED.

A. ADAMSON, rubber machinery manufacturer (Akron, Ohio).—Calendar with reproduction of Blenner's painting of a lady, "In Maiden Meditation, Fancy Free."

Consumers' Rubber Co. (Bristol, Rhode Island).—Calendar with a picture of a girl, "Merry Christmas."

J. H. Stedman & Co., Inc. (Boston).—Calendar with large view of "The Old Town Mill" at New London, Conn., built in 1650.

The Stanford Rubber Supply Co. (Stamford, Connecticut).—Calendar with separate leaf for every day, with unusually large figures.

Eureka Fire Hose Manufacturing Co. (New York) send us a handsome calendar and a picture illustrating the importance of caring for fire hose.

Continental Rubber Works (Erie, Pennsylvania) have presented to their friends in the trade, as their 1908 picture, "Marguerite," a handsome copy on ivory board from a canvas of the celebrated American artist, Mr. W. H. McEntee.

AFFAIRS OF THE ALADDIN RUBBER CO.

C. S. Eddy, receiver for The Aladdin Rubber Co. (Barberton, Ohio), has had the property appraised, with this result: Land and buildings, \$11,200; machinery and tools, \$18,127; scrap rubber stock, \$4,272.80; total \$33,399.80. The debts amount to about \$25,000, and the receiver thinks that if it is necessary to sell the property to satisfy the creditors, enough would be realized to pay 80 per cent. on the claims. But an attempt is being made to get the shareholders to pay an assessment in order to care for the indebtedness and avoid a sale and there is some prospect that this plan will succeed.

TRADE NEWS NOTES.

THE Sunswick Co. (Astoria, New York), on January 25, made an assignment for the benefit of their creditors, to David Steward Bingham, No. 80 Broadway, New York. A meeting of creditors was to be held at that address on January 30 at 2 P. M. The Sunswick Co. are in the insulated wire trade.

E. Bers & Co., in the waste rubber trade in Philadelphia, have removed their offices to a new and superior location, No. 330 South Delaware avenue, adjoining their warehouses.

The Faultless Rubber Co. (Ashland, Ohio), have established a New York branch at No. 27 West Fourth street, where a complete stock of their products will be carried.

The American Agency for the Harburg and Vienna India-Rubber Co. (Vereinigte Gummiwaaren-Fabriken Harburg-Wien, Actiengesellschaft) has been taken by George Borgfeldt & Co., No. 48 West Fourth street, New York.

Charles J. Bailey, of C. J. Bailey & Co., rubber goods dealers, in Boylston street, Boston, and the inventor of the "Won't Slip" tire tread, sailed on January 21 for a six weeks' trip to Europe, where his house has extensive connections.

Mr. Joseph Thomas Hart, who has become general manager of the La Crosse Rubber Mills Co., came to that company in June, 1907, from Berlin, Ontario, where he had been superintending the Merchants Rubber Co. factory. Mr. Hart's father was a successful rubber factory superintendent, having been some time in the employ of the Goodyear India-Rubber Glove Manufacturing Co., and later of the Lycoming Rubber Co., at Williamsport, Pennsylvania.

THE DIAMOND COMPANY'S WIRE DEPARTMENT.

A FEW years ago, a very few in fact, when the Diamond Rubber Co. built a "saw toothed" building for housing the great vulcanizing department, which is such an important end of their tire equipment, the management thought that they had stopped building for a while. They were wrong, as is proved by the fine six story brick building that is now nearing completion and which is to be used chiefly for the manufacture of insulated wire. Five floors of this building, which is 240 feet long and 100 feet wide, will very shortly be filled with electrically operated machinery of the latest type for turning out electric wires and cables. As soon as this is thoroughly equipped the small insulated wire department, which for nearly a year has been run as a unit for training men and smoothing away minor difficulties of manufacture, will be consolidated with this, and then the Diamond will be heard of as one of the large producers of goods of this type. As the company does not need the whole building for the new product, the entire top floor will be turned into department for the manufacture of machine made hose of all kinds. This will not only relieve the much congested hose department now in use but will give one of the most comfortable and up-to-date arrangements that could be imagined.

TRADE NEWS NOTES.

THE G & J Tire Co. have discontinued their Boston branch, at No. 204 Columbus avenue, and turned over the New England agency for their tires to The Enterprise Rubber Co., of Boston, of which William E. Barker is president and treasurer.

The St. Louis Rubber Cement Co. have removed their New England office from Boston to Lynn, Massachusetts, where Manager W. O. Hadley is located in the Bergengren building.

There has been in progress for several days at the order of Mayor McClellan, of New York, an investigation as to the conditions under which fire hose is purchased for the city and the quality of the city's present supply of hose. On January 22 the fire commissioner made a request that the board of aldermen appropriate \$250,000 for a new fire hose, but the appropriation made was only \$50,000, the reason given being that it might be better to await the result of the investigation ordered by the mayor.

Morgan & Wright (Detroit, Michigan) have discontinued their branch at Cleveland, Ohio, after arranging with the Ohio Rubber Co., at No. 2048 East Ninth street, for the sale of their tires in that territory.

Revere Rubber Co. (Boston) announce a change of address of their Pittsburgh branch to 501 Hartje building.

The Massachusetts Chemical Co. (Walpole, Massachusetts), manufacturers of insulating tapes, varnishes, etc., are opening a branch office in Chicago, to be located at 464 Monadnock building. Mr. Arthur E. Duolos, well known to the electric trade in the middle West, will be in charge.

Pneumatic Heel Cushion Co., January 11, 1908, under the laws of New Jersey; capital authorized, \$100,000. Incorporators: William L. Gordon, Milan Ross, and Joseph G. Coleman, all of No. 213 First avenue, Asbury Park, N. J., where a factory will be located. Mr. Gordon is president of the company and Mr. Ross vice president and treasurer.

PERSONAL MENTION.

COLONEL SAMUEL P. COLT has resigned the presidency of the Industrial Trust Co., of Providence, the leading financial institution in Rhode Island and one of the most important in New England. Colonel Colt was the founder of the Industrial Trust and is understood to retain his property interest in it, his resignation as its head being due to the condition of his health and a desire for relief from some of the cares of business.

Dr. Alberto Pirelli, of Pirelli & Co., rubber manufacturers at Milan, Italy, has decided upon another visit to the United States, and is understood to be a passenger on the *Lusitania*, which sailed from Liverpool on January 25.

NEW TRADE PUBLICATIONS.

THE NEW JERSEY CAR SPRING AND RUBBER Co. (Jersey City, New Jersey) issue a new catalogue of Rubber Goods for mechanical purposes, beginning with hose for many purposes, followed by belting, valves, packing, mats, and a large number of other rubber items, and ending with various hose accessories. [4½" x 7". 132 pages.]

CLING-SURFACE Co. (Buffalo, New York) issue a booklet on "The Treatment of Belts and Ropes for Service and Profit," the purpose of which is to explain the use of "Cling-Surface," a preservative food for the treatment of rubber and other belts in order to get special results. [4½" x 7". 87 pages.]

STANLEY SUPPLY Co. (No. 38 East Twenty-first street, New York) issue a catalogue of Rubber Goods for Physician, Surgeon, and Hospital, which they supply from the best makers in this line. [3½" x 6½". 21 pages.]

ANDREW J. MORSE & SON, Inc. (Boston) issue a catalogue of Fire Department Supplies, in great variety, including hose and all the standard accessories therefor. [5¼" x 7½". 48 pages.]

AN AERIAL PRESS ROOM.

BECAUSE of their weight and the necessity for solid foundations, vulcanizing presses in rubber mills usually are set on the ground floor, and often in basements that are some feet below the ground level. Where only one or two presses are used this is all right, but where a battery of presses running into the hundreds is assembled, even in a high studded room, the floor of which is flush with the ground, the radiation is so great that there are times when the whole department will be shut down because the workmen are unable to stand the intense heat. This was the condition at the works of The B. F. Goodrich Co. (Akron, Ohio) in their small press department until very recently. Now, however, they have a department for small press work occupying the whole top floor of one of their new reinforced concrete buildings. With great windows on all sides so arranged that, no matter how hot the day or how constantly the presses are run, the workmen will always be comfortable. This press room, with its battery of 140 hydraulic presses between 60 and 70 feet in the air, is not only novel but thoroughly and wholesomely practical. It can now be run continually day and night if necessary, and with the amount of goods of this type that this company turns out it usually is necessary. As a bit of rubber engineering and an overcoming of difficulties in a revolutionary manner it is unique.

THE NEW TAINTOR FACTORY.

IT is now just about 18 years since THE INDIA RUBBER WORLD devoted an article of considerable length to the factory of The H. F. Taintor Manufacturing Co. (New York), who have become so well known as extensive manufacturers of whiting and paris white. The factory was at that time located in Brooklyn, under conditions then regarded as exceptionally favorable, and particularly as more convenient than the premises which had been used previously by the Taintor company. Business conditions change with time, however, and after occupying the Brooklyn plant for the long term of years above referred to, they have established themselves in an entirely different location, having erected and equipped a complete new factory at Bayonne, New Jersey. Here the same class of products as have made the name of Taintor so widely known will be produced under conditions even more favorable than in the past, while shipping facilities have been improved, and there is room for a long continued growth of the firm's business. The offices of the firm, however, remain unchanged—at No. 200 Water street, New York.

Review of the Crude Rubber Market.

THERE has been no change in the conditions of the crude rubber market during the past month worth chronicling here. Quotations for Pará sorts, particularly, are lower than at the beginning of the month, but trading has been so inactive that prices named are little more than nominal, and have little bearing upon what market levels may be reached when consumers begin again to call for rubber more freely.

The production of rubber of all grades was larger during 1907 than for any former year, and, in view of the somewhat reduced consumption during the latter part of the year, visible supplies have increased materially. Meanwhile stocks in factories are believed to be much larger than for some years past, owing to the fact that with the beginning of the last marked decline large consumers placed orders in excess of their usual demands.

Should production continue at the present rate, it is likely to be some time before the normal relation between supply and demand is restored. There are indications, however, that present prices will lessen the activity of collectors of forest rubber, at least after the current season, just as the high prices for some years past have stimulated collection. All European authorities mention the decline of activity in the American trade as a feature of importance in the fall in prices of crude rubber, and in view of the recuperation from the recent business depression it seems to be taken for granted that the rubber industry will soon resume its wonted busy condition. This prediction doubtless is well founded, though the present "open" winter doubtless will have the effect of a reduced consumption of rubber for footwear in the coming business year. But as intimated above, an immediate increase in the manufacturing activity would not remove the stocks of rubber which have been accumulating for some months past, and which must be worked off before new rubber arriving will be in demand at higher than present rates.

Following are the quotations of New York for Pará grades one year ago, one month ago, and January 30—the current date:

PARÁ.	Feb. 1, '07.	Jan. 1, '08	Jan. 30
Islands, fine, new.....	118 @ 119	76@77	71@72
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	123 @ 124	82@83	74@75
Upriver, fine old.....	127 @ 128	84@85	75@76
Islands, coarse, new.....	72 @ 72½	50@51	45@46
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	97½@ 98	65@66	55@56
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet.....	78 @ 79	50@57	50@51
Caucho (Peruvian), ball.....	96 @ 97	65@66	55@56
Ceylon (Plantation) fine sheet.....	137 @ 138	95@96	80@80

AFRICAN.

Sierra Leone, 1st quality.....	72@73	Lopari ball, prime.....	65@66
Massai, red.....	72@73	Lopari strip, prime.....	60@61
Penguella.....	48@49	Madagascar, pinky.....	64@65
Acera flake.....	12@13	Ikelemba.....	none here
Cameroon ball.....	47@48	Soudan niggers.....	65@66

CENTRALS.

Esmeralda, sausage.....	50@57	Mexican, scrap.....	55@56
Guayaquil, strip.....	48@49	Mexican, slab.....	40@41
Nicaragua, scrap.....	55@59	Mangabeira, sheet.....	42@43
Panama.....	42@43	Guayule.....	29@30

EAST INDIAN.

Assam.....	64@65	Borneo.....	31@32
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Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	38350	Upriver, fine.....	4\$100
Islands, coarse.....	28000	Upriver, coarse.....	3\$000
		Exchange.....	15 7/32d.

Latest Manáos advices:

Upriver, fine.....	48350	Exchange.....	15 3/16d.
Upriver, coarse.....	28350		

Statistics of Para Rubber (Excluding Caucho).

	New York	Total	Total	Total
	Fine and Medium	Coarse	1907	1906
Stocks, November 3.....	70	65	135	154
Arrivals, December.....	794	284	1078	1288
Aggregating.....	864	349	1213	1442
Deliveries, December.....	779	320	1099	1320
	85	29	114	122
	PARÁ	EXOTIC	1907	1906
Stocks, November 30.....	140	800	395	505
Arrivals, December.....	2285	2555	2685	1915
Aggregating.....	2425	3415	3380	1655
Deliveries, December.....	2177	3415	2795	1925
Stocks, December 31.....	248	585	830	570
World's visible supply, December 31.....	1907	1906	1905	1904
Para receipts, July 1 to December 31.....	12930	13,499	13,595	13,935
Para receipts of Caucho, same dates.....	1,340	1,205	1,340	1,205
Altogether from Para to United States, Dec. 31.....	585	95	682	682
Altogether from Para to Europe, Dec. 31.....	797	485	1282	1282

MORSE'S STATISTICS OF NEW YORK ARRIVALS.

	1904	1905	1906	1907
Fine Pará.....	9520	8973	9950	10031
Coarse Pará.....	4841	4968	5160	5087
a Centrals.....	4952	4475	5884	7023
East India and Africa.....	9204	10270	8024	7292
Total.....	27623	28635	29930	29433

a Including Caucho and Pernambuco.

Statistics of Rubber Production.

	1907	1906
Vallambrosa Rubber Co.....	104,795	99,258
Bukit Rajah Rubber Co.....	99,442	72,571
Consolidated Malay Rubber Co.....	95,500	32,693
Yatlyantota (Ceylon) Tea Co.....	5,840	8,700

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—have been about as follows, though a definite market can hardly be said to have been established as yet:

Old rubber boots and shoes—domestic.....	8½@ 8
Old rubber boots and shoes—foreign.....	7½@ 7
Pneumatic bicycle tires.....	6½@ 6
Automobile tires.....	7½@ 7
Solid rubber wagon and carriage tires.....	7½@ 7
White trimmed rubber.....	10½@ 11
Heavy black rubber.....	4½@ 4
Air brake hose.....	4½@ 4
Fire and large hose.....	38¢@ 33¢
Garden hose.....	2½@ 2
Matting.....	15¢@ 15¢

In regard to the election of Mr. A. H. Alden, president of the New York Commercial Co., as vice president of the New York Produce Exchange Bank, after having been a director for several years, the *Mercantile and Financial Times* says that he is a business man of ability and sound experience, and that a better or more acceptable selection could not have been made.

Plantation Rubber.

The first London auction for the year occurred on January 10, when the quantity of plantation sorts offered was the largest yet recorded. The quantity was 11½ tons from Ceylon and 41½ tons from Malaya, total, 53¼ tons. Plantation kinds have declined recently at about the same proportion as Pará sorts, though for a few especially fine lots higher prices were realized. Hard fine Pará was quoted at 3s. 4d. and fine plantation sold at 3s. 8d. to 4s. 3d. At the corresponding sale last year plantation sold up to 5s. 0½d. During 1907, 814 tons of plantation rubber were offered at the London auctions, against 348½ tons in 1906.

Gow, Wilson & Stanton, Limited, report:

A feature that has lately been noticeable, and which was further emphasized at to-day's sale, was that the medium and lower grades of crepe were in more request than has been the case of late, and, compared with other grades, prices of these kinds showed some improvement. Unwashed scrap, when clean and free from bark, was also well competed for.

The exports of cultivated rubber from the Federated Malay States for the first eleven months of 1907 are officially reported:

From Perak	pounds	224,740
From Selangor		1,072,472
From Negri Sembilan		401,042
Total		1,759,100

The exports of Pará rubber from the ports of Singapore and Penang from January 1 to November 30, which, by the way, do not correspond exactly with the above figures, were as follows:

	POUNDS		POUNDS
To Great Britain	1,307,334	To Australia	22,248
To Europe	154,000	To Ceylon	100,550
To United States	4,134		
To Japan	13,059	Total	1,730,331

[From Singapore, 1,268,330; from Penang, 462,001.]

At the above rate the complete shipments from the two Straits ports would reach 1,887,634 pounds, or about 800 English tons.

The latest advices from Ceylon permit the record of exports of cultivated rubber from that colony for 1907 to be brought down to December 23, which practically closes the year. A comparative statement by years would stand as follows:

1907 (to December 23)	pounds	500,373
1906		327,024
1905		108,247
1904		72,040
1903		41,684

Destination of Exports, 1907

Great Britain	301,000	France	1,748
United States	170,974	Holland	151
Germany	15,501	India	112
Australia	11,034	Denmark	90
Belgium	5,034	Japan	33

The total shipment of Ceylon grown rubber for 1907 would appear to be about 220 English tons; the total including Malay States rubber was about 1,020 tons.

Para.

R. O. AHLERS & Co. reported [December 31] news from the Madeira and Juruá rivers that rubber gathering had been stopped on some *seringueas* and that the shipments of rubber from those regions were being withheld. "It is generally believed," they wrote, "that supplies will fall off considerably during the coming three months." Pará arrivals (including Cauchio) for the crop season up to December 31 had totaled 14,240 tons, against 14,720 tons for the same period of last year and 14,000 tons for the six months ending December 31, 1905.

Messrs. Ahlers & Co. reported later [January 11]: "The feeling of anxiety about the near future of the rubber market during our months of principal receipts has been deepened still more by the fact that nearly all buyers for *sertao* (Upriver) have withdrawn their offers, thus apparently preparing a new drop in prices. Only small orders were filled at lower quotations, probably only to complete some previous orders for future delivery."

PARA EXPORTS, JULY-DECEMBER, 1907.

From Pará	kilos	6,478,741
From Itacatuara, direct		68,526
From Manaus, direct		5,012,120
From Iquitos, direct		1,489,267
Total		13,948,654

Manaos.

DURING November and five months of the crop season (including cauchio), reported by Sociedade Anonyma Armazens Andresen:

FROM—	1907.	1906.	1905.	1907.	1906.	1905.
Rio Purus	502	666	483	3006	2368	2524
Rio Juruá	288	346	380	832	938	1078
Rio Madeira	283	364	339	1363	1601	1349
Rio Solimões	335	342	433	1557	1229	1208
Rio Negro	25	45	40	29	60	50
From Iquitos	366	426	279	880	1071	1047
Total	1799	2180	1954	7667	7297	7256

MANAOS EXPORTS OF RUBBER, 1907.

	New York.	Liverpool.	Continent.	Total.
Fine	4,390,295	3,508,740	2,514,470	10,332,481
Medium	1,240,054	705,020	201,033	1,955,723
Coarse	1,332,053	1,035,000	605,128	3,033,741
Cauchio	1,087,330	2,304,120	1,121,202	4,602,724
Total	7,778,318	7,944,488	4,501,803	19,924,669

Direct from Manaus to Hamburg.

1902	tons	104	1905	tons	858
1903		266	1906		1,053
1904		403	1907		1,571

New York.**NEW YORK RUBBER PRICES FOR DECEMBER (NEW RUBBER).**

	1907.	1906.	1905.
Upriver, fine	82½ 80	1.22½ 1.24	1.23½ 1.29
Upriver, coarse	66½ 72	96½ 98	90½ 97
Islands, fine	72½ 79	1.18½ 1.20	1.20½ 1.26
Islands, coarse	44½ 50	71½ 73	71½ 77
Cametá	43½ 48	72½ 74	72½ 78

SUMMARY OF PRICES FOR 1907.

	UPRIVER		ISLANDS		
	FINE	COARSE	FINE	COARSE	CAMETA.
January	121½ 124	96½ 98	117½ 120	71½ 73	72½ 74
February	119½ 123	95½ 98	117½ 119	69½ 72	71½ 73
March	116½ 121	92½ 96	114½ 119	66½ 70	71½ 73
April	115½ 118	91½ 94	114½ 116	66½ 68	71½ 72
May	112½ 116	88½ 92	110½ 115	62½ 67	70½ 72
June	108½ 112	86½ 88	104½ 110	61½ 63	70½ 71
July	108½ 115	86½ 90	104½ 108	61½ 64	70½ 71
August	108½ 115	86½ 92	104½ 100	60½ 62	66½ 66
September	106½ 110	88½ 90	99½ 105	58½ 60	62½ 66
October	98½ 106	84½ 88	91½ 99	56½ 59	55½ 62
November	83½ 90	68½ 85	72½ 92	44½ 56	42½ 56
December	82½ 86	66½ 72	72½ 79	44½ 50	43½ 48

Average Prices.

1907	100½	88	104½	61½	65½
1906	124½	93½	121	70	72½
1905	128½	93½	125½	72	74
1904	113½	87½	110	65½	65½
1903	94½	76½	91½	57½	59½
1902	76	60½	73	47½	50½

Liverpool.

WILLIAM WRIGHT & Co. report [January 2]:

Fine Para.—Taking into account the strained financial situation, the market has on the whole been steady. Prices naturally have fluctuated, but only to a moderate extent, closing about ½d. per pound down from last month's final price. That financial conditions are improving in America is without doubt, but at the same time trade over there has had a severe "set back," and must take time to recover to normal requirements. If, as we are informed, American consumption is likely to be on a considerably reduced scale, then in view of the prospective heavy receipts up to March next, a further decline in values is more than likely. On the other hand, America has such wonderful recuperative powers that, once given financial confidence, a substantial increase in prices might easily accrue. The position is most uncertain, and consequently sellers are chary of selling far ahead, but on balance we are inclined to think that present rates are worth some attention by manufacturers.

MASSACHUSETTS CHEMICAL CO.

WALPOLE, MASS., U. S. A.

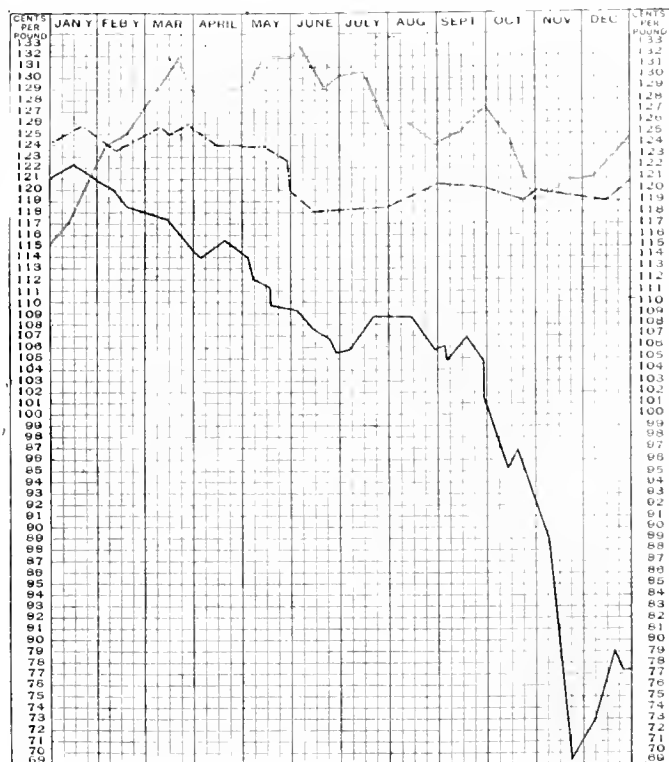
Operate Walpole Rubber Works, Walpole Varnish Works.

RUBBER MANUFACTURERS CAN SAVE MONEY BY USING OUR

No. 17 RUBBER FLUX No. 48

It permits additional compounding and puts old stocks in a merchantable condition

Our Flux is used extensively by wire manufacturers for slicking and weatherproofing. Write for prices and samples. We are the largest manufacturers of Friction Tapes in the world. If interested write us about Friction Tape and Cloth.



1905 1906 1907

Our Quotations in Diagram are for Island Fine Para

CHART SHOWING FLUCTUATIONS IN ISLANDS SPOT FINE PARA RUBBER AT NEW YORK, FOR THREE YEARS.

[Copyright, 1908, by Henry A. Gould.]

Caucho From the Lower Amazon.

FORMERLY the supplies of caucho (known widely also as Peruvian rubber) shipped from Pará, had their origin solely in the upper Amazon regions. More recently, however, caucho

has been discovered in various parts of the state of Pará, on the lower Amazon, and is being collected in considerable quantities. Arrivals at Pará from the new sources during the last two crop years were (by rivers):

	Tocantins.	Amazon.	Xingu.	Total.
1905-06	945	20	15	758
1906-07	725	4	32	859

Liverpool.

EDMUND SCHLIER & Co. report [December 31]:

The year closes with an uncertain tendency. The explanation of the previous decline in the value of rubber still holds good, and with apparently plenty of rubber to come from the Amazon and a further increase from the East prices may not advance. On the other hand, our figures show that with approximately equal supplies we have had dearer prices than those ruling now, and a little more confidence in stability of money and credit may stimulate the demand.

THE WORLD'S VISIBLE SUPPLY OF PARA, DECEMBER 31.

	1907	1906	1905	1904	1903	1902
Tons	37,390	2,354	2,740	20,488	3,351	3,305
Prices, hard fine	3 5	5 2 1/2	5 5	5 1 1/4	3 11 1/2	3 8

LIVERPOOL STOCKS OF AFRICAN RUBBER, DECEMBER 31.

	1907	1906	1905	1904	1903	1902
1907	304			308		586
1906	282			255		770
1905	300			375		576

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

JANUARY 2.—By the steamer <i>Madagascare</i> , from Manáos and Pará:	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse Co.	87,400	11,200	66,600	300	165,000
C. P. dos Santos	90,000	13,000	31,700	...	141,600
New York Commercial Co.	63,100	10,800	20,900	5,100	99,900
Poel & Arnold	13,000	13,000	11,900	...	37,900
General Rubber Co.	5,700	700	24,400	1,200	32,000
Hagemeyer & Brunn	5,300	...	9,200	...	14,500

Total	271,000	40,600	164,700	6,600	491,900
JANUARY 13.—By the steamer <i>Centrose</i> from Manáos and Pará:	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	148,800	25,700	64,500	...	239,000
A. T. Morse & Co.	98,000	10,900	32,000	46,700	187,600
General Rubber Co.	58,200	7,500	61,500	...	127,200
Poel & Arnold	80,700	9,300	90,700	6,900	187,600
Edmund Reek & Co.	14,800	2,100	18,500	400	35,800
C. P. dos Santos	16,800	1,100	15,200	...	33,100
Total	417,300	56,600	282,400	54,000	810,300

CONSUMPTION OF INDIA-RUBBER BY THE UNITED STATES AND CANADA (IN TONS).

[From the Annual Statistical Summary of Albert T. Morse & Co., New York.]

DETAILS.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Imports to United States	14643	16182	14333	17671	18620	23095	20468	23208	21842	24760	27623	28635	29936	29433
Exports to Europe	391	324	500	250	150	300	450	680	430	400	274	357	1625	558
Add Stock on January 1	14252	15858	13833	17421	18470	22795	20018	22528	21412	24270	27349	28278	28311	28875
	1037	1420	558	641	744	591	712	1198	1399	331	256	305	537	305
Less Stock close of year	15289	17278	14391	18062	19214	23386	20730	23726	22811	24601	27605	28583	28848	29240
	1420	558	641	744	591	712	1198	1399	331	256	305	537	365	606
Deliveries to Manufacturers	13869	16720	13750	17318	18623	22674	19532	22327	22480	24345	27300	28046	28483	28634

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

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OR WEEKLY DELIVERIES**

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**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

PARA RUBBER VIA EUROPE.

JAN. 4. By the <i>Patricia</i> —Hamburg:	
W. L. Gough Co.	14,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

POUNDS.

Dec. 24. By the <i>Siberia</i> —Columbian ports:	
Schulte & Goschen	5,500
Schulte & Kueckhaber	3,500
Columbian Trading Co.	2,500
G. Amsinck & Co.	2,500
Suzarte & Whitney	1,500
Jose Julia & Co.	1,000
Aranburu Incorporated	500
	17,000

Dec. 26. By the <i>Bayamo</i> —Tampico:	
Edward Maurer	44,500
Poel & Arnold	22,500
N. Y. Commercial Co.	15,000
E. Steiger & Co.	4,500
	86,500

Dec. 26. By the <i>Momus</i> —New Orleans:	
Eggers & Heimann	1,000
Fried Probst & Co.	1,000
G. Amsinck & Co.	500
A. Rosenthal Sons	500
	3,000

Dec. 26. By the <i>La Plata</i> —Columbian ports:	
G. Amsinck & Co.	2,500
A. Held	1,000
Roldan & Van Sickle	1,000
	4,500

Dec. 28. By <i>El Rio</i> —Galveston:	
Continental Mexican Rubber Co.	15,000

Dec. 27. By the <i>Panama</i> —Colon:	
Hinzel Fellman	4,000
A. Santos & Co.	3,500
Isaac Brandon & Bros.	3,500
Roldan & Van Sickle	1,500
A. M. Capens Sons	1,000
W. R. Grace & Co.	1,000
G. Amsinck & Co.	1,000
	15,500

Dec. 28. By the <i>Merida</i> —Vera Cruz:	
Harburger & Stack	3,000
H. Marquardt & Co.	1,000
	4,000

Dec. 30. By <i>El Du</i> —New Orleans:	
G. Amsinck & Co.	5,000
J. Julia & Co.	2,000
Manhattan Rubber Mfg. Co.	1,500
A. T. Morse & Co.	1,500
	10,000

Dec. 31. By the <i>Augustus Wilhelm</i> —Savannah:	
Schulte & Goschen	5,500
Mecke & Co.	500
Seanz & Co.	500
	6,500

JAN. 2. By the <i>Dunetta</i> —Colon:	
Demarest Bros. Co.	5,500
Piza, Nephews Co.	4,500
A. Rosenthal Sons	2,500
A. Santos & Co.	2,000
R. G. Barthold	500
	15,000

JAN. 4. By the <i>Morro Castle</i> —Frontera:	
Strube & Ullrich	3,000
E. Steiger & Co.	1,500
E. U. Tibbals Co.	1,000
H. Marquardt & Co.	1,000
	6,500

JAN. 4. By the <i>Gracia</i> —Colombia:	
G. Amsinck & Co.	2,500
D. A. DeLima & Co.	2,000
American Trading Co.	500
	5,000

JAN. 6. By the <i>Vigilancia</i> —Tampico:	
Edward Maurer	45,000
Continental Mexican Co.	45,000
European account	55,000
	145,000

JAN. 6. By <i>El Valle</i> —New Orleans:	
A. N. Rotholz	2,500

JAN. 8. By the <i>Financé</i> —Colon:	
G. Amsinck & Co.	4,500
Mecke & Co.	1,000
A. Santos & Co.	1,000
	6,500

JAN. 9. By the <i>Camaguey</i> —Tampico:	
New York Commercial Co.	115,000
Continental Mexican Co.	45,000
	160,000

JAN. 9. By the <i>Tagus</i> —Columbian ports:	
D. A. DeLima & Co.	2,500
A. Held	2,000
Schulte & Goschen	1,500
Graham & Hinkley Co.	500
	6,500

JAN. 11. By the <i>México</i> —Frontera:	
Harburger & Stack	4,500

JAN. 13. By the <i>Colon</i> —Colon:	
G. Amsinck & Co.	18,500
Demarest Bros. Co.	3,000
A. Santos & Co.	2,000

J. Johnson & Co.	1,500
Aranburu Incorporated	2,500
Ambras & Co.	1,500
Eggers & Heimann	1,500
R. G. Barthold	500
	7,000

JAN. 14. By the <i>Cuba</i> —New Orleans:	
A. N. Rotholz	1,000
A. T. Morse & Co.	1,000
	2,000

JAN. 14. By the <i>Uschem</i> —Columbian ports:	
Schulte & Goschen	3,500
Kunhardt & Co.	3,500
G. Amsinck & Co.	2,500
Cortés Commercial Co.	1,500
Seanz & Co.	1,000
United Fruit Co.	1,000
	14,000

JAN. 15. By the <i>Martinez</i> —Tampico:	
Edward Maurer	45,000
Reusch & Heide	22,500
For European account	16,000
	83,500

JAN. 16. By <i>El Rio</i> —Galveston:	
Continental Mexican Rubber Co.	15,000

JAN. 18. By the <i>Martinez</i> —Vera Cruz:	
H. Marquardt & Co.	1,500
Schulte & Goschen	1,000
	2,500

JAN. 22. By the <i>Sagua</i> —Georgetown:	
G. Amsinck & Co.	2,500
Mecke & Co.	2,500
Suzarte & Whitney	2,500
	7,500

JAN. 23. By the <i>Intelle</i> —New Orleans:	
G. Amsinck & Co.	2,500
	2,500

JAN. 24. By the <i>Panama</i> —Colon:	
G. Amsinck & Co.	15,500
Jose Julia & Co.	7,500
Meyer Hecht	2,000
Hinzel, Fellman & Co.	2,000
R. Faden & Co.	1,000
	28,000

JAN. 24. By the <i>Bayamo</i> —Tampico:	
Edward Maurer	75,000
New York Commercial Co.	6,000
	81,000

This sign, in connection with imports of Centrals, denotes Guayule rubber.

AFRICANS.

POUNDS.

Dec. 27. By the <i>Isaborn</i> —Liverpool:	
Geo. A. Alden & Co.	20,000
Poel & Arnold	11,500
	31,500

Dec. 27. By the <i>Hermana</i> —Lisbon:	
Poel & Arnold	22,500

Dec. 30. By the <i>Campana</i> —Liverpool:	
George A. Alden & Co.	9,000
Poel & Arnold	9,000
Rubber Trading Co.	5,500
	23,500

Dec. 30. By the <i>Pretoria</i> —Hamburg:	
General Rubber Co.	15,500
A. T. Morse & Co.	22,500
	38,000

Dec. 31. By the <i>St. Laurent</i> —Havre:	
Poel & Arnold	105,000

JAN. 2. By the <i>Finland</i> —Antwerp:	
Poel & Arnold	35,000
A. T. Morse Co.	25,000
Robinson & Stiles	11,000
Joseph Cantoni	3,000
Geo. A. Alden & Co.	2,500
	76,500

JAN. 3. By the <i>Celtic</i> —Liverpool:	
Livesey & Co.	9,000
George A. Alden & Co.	7,000
A. T. Morse & Co.	7,000
	23,000

JAN. 4. By the <i>Munichaha</i> —London:	
W. L. Gough Co.	18,000

JAN. 4. By the <i>Patricia</i> —Hamburg:	
Poel & Arnold	9,000
A. T. Morse & Co.	4,500
General Rubber Co.	4,500
W. L. Gough Co.	2,500
	20,500

JAN. 6. By the <i>Peninsular</i> —Lisbon:	
Poel & Arnold	45,000

JAN. 10. By the <i>Hudson</i> —Havre:	
Poel & Arnold	45,000

JAN. 10. By the <i>Loystaken</i> —Lisbon:	
General Rubber Co.	60,000

JAN. 13. By the <i>Carmania</i> —Liverpool:	
George A. Alden & Co.	14,000
W. L. Gough Co.	2,500
	16,500

JAN. 24. By the <i>George</i> —Liverpool:	
George A. Alden & Co.	11,500
A. T. Morse & Co.	11,500
Rubber Trading Co.	5,500
	28,500

EAST INDIAN.

POUNDS.

Dec. 23. By the <i>New York</i> —London:	
Robinson & Stiles	3,000
George A. Alden & Co.	1,500
	4,500

Dec. 24. By the <i>Sidamuly</i> —Colombo:	
A. T. Morse & Co.	12,500

Dec. 24. By the <i>Indramati</i> —Singapore:	
Hebler & Co.	25,000
W. L. Gough Co.	23,000
George A. Alden & Co.	23,000
Winter & Simberloff	11,000
Poel & Arnold	7,000
	89,000

Dec. 24. By the <i>Wabba</i> —London:	
Robinson & Stiles	3,500

JAN. 1. By the <i>Don Kelly</i> —Singapore:	
W. L. Gough Co.	25,000
Geo. A. Alden & Co.	22,000
Hebler & Co.	1,000
Poel & Arnold	10,000
	67,000

JAN. 2. By the <i>Martinez</i> —Colombo:	
A. T. Morse & Co.	11,500

JAN. 6. By the <i>St. Paul</i> —London:	
A. T. Morse & Co.	33,500
Robinson & Stiles	2,500
	36,000

JAN. 11. By the <i>Headley</i> —Singapore:	
W. L. Gough Co.	20,000
Poel & Arnold	5,000
Joseph Cantoni	5,000
	30,000

JAN. 12. By the <i>March</i> —Singapore:	
Geo. A. Alden & Co.	2,000
W. L. Gough Co.	15,000
Joseph Cantoni	5,000
	40,000

JAN. 16. By the <i>German</i> —London:	
General Rubber Co.	7,000

JAN. 18. By the <i>African</i> —Colombo:	
A. T. Morse & Co.	13,500

*Denotes Plantation Rubber.

GUTTAJELUTONG.

Dec. 23. By the <i>Indramati</i> —Singapore:	
Poel & Arnold	255,000
Hebler & Co.	10,000
M. Joachimsen	210,000
W. L. Gough Co.	155,000
J. W. Phylle & Co.	90,000
George A. Alden & Co.	55,000
H. Paul	20,000
	1,245,000

JAN. 3. By the <i>Don Kelly</i> —Singapore:	
M. Joachimsen	475,000
E. O. Bragdon Sons	255,000
Hebler & Co.	155,000
W. L. Gough Co.	155,000
Poel & Arnold	90,000
H. Paul	55,000
	1,185,000

JAN. 13. By the <i>Headley</i> —Singapore:	
Hebler & Co.	200,000
M. Joachimsen	155,000
W. L. Gough Co.	155,000
J. W. Phylle & Co.	55,000
E. O. Bragdon Sons	55,000
Poel & Arnold	50,000
Joseph Cantoni	50,000
H. Paul	10,000
	730,000

JAN. 15. By the <i>March</i> —Singapore:	
M. Joachimsen	220,000
Hebler & Co.	100,000
W. L. Gough Co.	100,000
E. O. Bragdon & Sons	55,000
	475,000

B.M.A.T.A.

POUNDS.

Dec. 28. By the <i>Fredk. Hendrik</i> —Trinidad:	
Middleton & Co.	11,000

Dec. 30. By the <i>Kerna</i> —Demerara:	
George A. Alden & Co.	9,500

JAN. 10. By the <i>Parma</i> —Demerara:	
George A. Alden & Co.	7,000

JAN. 17. By the <i>Grenada</i> —Ciudad Bolivar:	
G. Amsinck & Co.	11,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK DECEMBER.

Imports:	Pounds.	Value.
India-rubber	3,758,410	\$2,250,070
Balata	24,714	7,040
Gutta-percha	13,043	4,010
Gutta-jelutong	28,125,547	134,353
Total	6,787,718	\$2,400,588
Exports:		
India-rubber	127,507	\$91,445
Reclaimed rubber	37,449	5,437
Rubber Scrap Imported	1,001,120	\$79,813



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FEBRUARY 1, 1908.

No. 5.

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Antwerp.

RUBBER STATISTICS FOR DECEMBER.

	1907.	1906.	1905.	1904.	1903.
Stocks, Nov. 30	1,115,282	714,919	635,266	611,726	680,142
Arrivals in December	219,544	636,460	474,175	581,814	638,158
Long sorts	199,000	579,700	436,494	460,386	599,045
Other sorts	20,544	56,760	37,771	121,428	39,113
Aggregating	1,234,826	1,351,379	1,109,471	1,193,579	1,318,300
Sales in December	2,759,321	693,195	374,284	652,209	707,490
Stocks, December 31	1,006,804	658,184	735,487	541,301	610,000
Arrivals since Jan. 1	50,544	5,772,062	5,713,728	5,763,856	5,726,483
Long sorts	43,346,141	4,593,759	4,442,607	4,723,618	5,180,401
Other sorts	708,332	1,178,303	1,271,121	1,040,238	546,082
Sales since Jan. 1	4,705,763	5,849,095	5,519,805	5,833,395	5,773,668

EXPORTS OF INDIA-RUBBER FROM PARA IN 1907 AND FOR TEN YEARS.

[The Figures Indicate Weights in Kilograms.]

	UNITED STATES.			EUROPE.			Total.
	Fine.	Medium.	Coarse.	Canebo.	Medium.	Coarse.	
July	156,066	33,083	228,726	31,890	44,673	105,174	867,977
August	204,250	50,614	213,205	28,444	65,721	173,790	1,494,350
September	437,405	90,728	399,933	19,663	131,182	184,352	1,266,388
October	777,049	126,850	357,062	40,832	110,330	176,748	1,529,491
November	914,831	212,179	402,080	26,380	133,507	303,600	1,079,095
December	654,483	112,482	258,515	38,683	105,402	357,235	1,582,391
Total, 6 months	3,144,033	625,045	1,770,520	180,171	596,815	1,384,914	1,499,813
January-June	4,864,879	1,235,930	3,378,592	1,394,480	792,349	1,896,268	4,074,070
Total, 1907	8,008,912	1,861,875	5,149,112	1,580,657	1,359,164	3,101,182	5,574,783
Total, 1906	7,406,171	1,785,315	5,499,410	1,531,399	1,253,574	3,223,911	4,799,023
Total, 1905	7,173,493	1,518,444	4,921,222	1,947,216	1,200,793	2,198,516	4,363,660
Total, 1904	8,062,104	1,636,355	5,394,440	1,222,580	993,955	2,593,529	3,221,376
Total, 1903	7,248,065	1,621,827	5,099,646	1,133,857	1,107,950	2,659,748	3,061,517
Total, 1902	6,588,524	1,614,770	4,523,413	1,133,155	1,514,521	2,595,177	2,957,222
Total, 1901	8,027,727	1,926,505	4,271,450	1,325,290	1,559,358	2,605,553	2,638,599
Total, 1900	6,557,277	1,199,611	3,783,279	894,500	1,401,390	3,250,069	1,857,100
Total, 1899	7,583,405	1,319,349	4,023,710	951,854	1,030,459	2,527,013	1,583,572
Total, 1898	5,399,654	868,982	2,759,714	801,915	1,125,688	2,995,801	1,162,712
Total, 10 years	71,477,747	15,147,747	61,477,747	15,147,747	15,147,747	15,147,747	21,699,007

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RAIN COATS

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Trade Mark stamped in
inside of coat.....



INDIA RUBBER WORLD

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Edited by HENRY C. PEARSON—Offices, No. 395 Broadway, NEW YORK.

Vol. XXXVII. No. 6.

MARCH 1, 1908.

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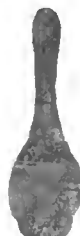
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GENUINE LITHARGE	HYDRO CARBON
Powdered and Flake	MINERAL RUBBER
SULPHUR	ELASTIC COMPOUND
VEGETABLE BLACKS	COMPO BLACK
BLACK FILLER	WAXES, Ceresine, Ozokerite
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THE PATERNAL PURCHASER.

THERE is a very general impression that it is easier to buy goods than to sell. To prove this one has only to advertise for good men in each class, with the result that there will be 20 applicants for a purchasing position to one for selling. The truth is, however, that wise buying is as much of a science as wise selling. One result of this general impression is a feeling on the part of purchasers that they can not only demand full measure, pressed down and running over, but that their rights go far beyond this, even to the beginning of the production of the goods they secure.

The present condition of things has been the result of a very natural evolution. Years ago, when a great corporation wanted rubber goods, the purchasing agent in an off-handed manner saw the manufacturer or his representative, gave a verbal order, told him to be good to himself in the matter of price, and both parties made large profits. A little later came the written order, and if the buyer thought he was shrewd, a subsequent claim for shortage in weight or defects in manufacture that notably discounted the bill. Then came printed specifications and competitive bidding. This reduced the manufacturer's profits, but as the speci-

cations first framed covered the style of goods wanted and the service required, it was a hardship only to those who did not know their business, or who in their shortsightedness skimmed the compound and paid for it later.

The next step in the evolution of specifications was the paternal attitude. The purchaser availed himself of the knowledge manufacturers were willing to give him, and of the service of his own chemists, and began to insist upon a regulation of ingredients used, of compounding, calendering, and manufacturing processes, with the result that many manifest absurdities crept into the specifications, and, what was worse, that serviceable goods were thrown aside because they did not come up to specification. An analysis of specifications for rubber goods in almost any line to-day shows clauses that certainly never would be written in by manufacturers making the goods for themselves.

The whole trouble lies in the fact that the buyer has carried a good system too far. If he wants to manufacture he should have his own factory and devote himself to that line. If, on the other hand, he simply wants to purchase, he will in the long run get a far better product if his specifications say:

"I want goods of such and such a type, for such a service. Use Pará rubber or mud, as your own wisdom may dictate, but do your best and give me a reasonable guarantee of service."

Of course, only reputable manufacturers would be dealt with on this basis, and the result would be not only fewer complaints on the part of purchasers, but a steady advancement in quality and durability of the goods produced. There is just as much sense in the purchaser specifying that only red haired men should run the calender on which his goods are turned out, as for him to specify that only Pará rubber should be used in ordinary lines of mechanical rubber goods.

Perhaps no one line of manufacture in the United States has received more careful attention on the part of purchasers than steel rails. All sorts of tests have been insisted upon, the most rigid specifications drawn, and yet very recently the Pennsylvania Railroad Co., heretofore the leader in this line of endeavor, has radically changed its method, vastly simplified its specifications, and practically said to the rail makers: "We want such and such product: Get it out your own way, under your own mill practice, but give us the goods."

This subject may have more pertinence just now to the rubber trade in view of the various investigations which have been made, or are now in progress, regarding the quality of fire hose in use by the New York fire department—a line of supplies which for some years past has been supplied only on specifications drawn by the department's experts.

The same principle as related to the manufacture of rubber insulation was clearly set forth in a paper which appeared in a recent issue of our journal.

THE LONDON RUBBER EXHIBITION.

THE plans outlined for the coming International Rubber Exposition in London are interesting, and we should be greatly pleased to be able in time to record the complete success of the undertaking. Certainly the exhibition has our support, and we bespeak for it the favorable consideration of every branch of the rubber interest. At the same time it may not be amiss to offer a suggestion or two by way of indicating to its organizers why the exhibition may fail to attract as much support as they are counting upon.

The Ceylon rubber exhibition of 1906 was a planters' show, held at the center of a new interest of great importance to that particular region, and the first tangible demonstration to the public of the success of rubber planting as a business. It was, in truth, a local exhibition—mainly a Ceylon enterprise—though its results were regarded with deep interest wherever there were investors in rubber plantations, whether in Ceylon or not. Doubtless other rubber exhibitions of a like character will be held, with like success, so long as there are unsolved questions in the preparation of rubber, the extraction of latex, and so on. But when practice in those matters becomes general, the element of novelty which is the very life of any exhibition that appeals to the public will be gone.

It would be very interesting to not a few people to see, in London or elsewhere, an exhibition in which should be brought together specimens of every known variety of raw rubber, illustrations of every process or method of preparing the material for industrial use, and factory practice as well, and finally a complete collection of manufactured articles. But rubber products as a class no more interest the general public than textile products or metals or leather goods. And an exhibition supported alone by the patronage of experts and the comparatively few persons engaged in the trade which it represents can hardly make an encouraging financial showing.

The fact is that rubber goods are on exhibition all the time, through being offered to the public for sale. But they are not offered as rubber goods, or as a special class. Tires go with automobiles, goloshes with other footwear, mackintoshes as clothing, syringes and the like with the general equipment of the drug store, and so on. There was a time when any useful article made of rubber was such a novelty as to justify making it as prominent as possible in public places, but the small number of rubber firms exhibiting at recent world's fairs indicates what manufacturers in this branch feel to-day in regard to making special exhibits.

But rubber goods manufacturers are exhibitors on a large scale as makers of subsidiary products or accessories. They exhibit tires, cements, and waterproof clothing at the automobile shows; hard rubber, insulated wire and tapes at the electrical exhibitions; mechanical goods at shows in connection with conventions of engineers;

and rubber footwear at such footwear shows as are held yearly in London. But in all these cases, however important may be the rubber goods referred to, they are after only accessories, and not the principal incentive to holding the various shows.

A public display of rubber factory apparatus and processes would appeal greatly to the manufacturing class. But it is safe to assume that those firms who now guard so carefully the secrets of their factories will take jolly good care not to expose them to the whole world for the sake of contributing to the success of a rubber exhibition.

THE OUTLOOK FOR BUSINESS.

WHILE industrial and business conditions cannot be said as yet to have returned to normal conditions, every month shows indications of further improvement. There is just as much real property in the country to-day as before the flurry last October; there is more money; there are as many people as before to be supplied with the necessities of life and luxuries. None of the conditions existed in October and none exist now such as have caused the financial panics of the past, but another condition existed which has had the effect of checking the mechanism of credit upon which business is based, by giving a blow to general confidence. That was a growing speculative element in the banking world, which, thanks to the more conservative majority of bankers in the principal centers, is in a fair way to be eliminated. The situation is much as if a cancerous growth had been cut from a human system before becoming fatal, the pain of the operation being soon forgotten in view of the improved condition of the patient.

One result of the episode has been to give the business world a better appreciation of how much its safety depends upon the character of banking methods and another is the warning, not likely soon to be forgotten, that unsound banking methods, no matter by whom introduced, will not be long tolerated by the real powers in control of the country's financial system. Nor are the lessons of the late financial disturbance confined to affairs of banking alone. So many apparent fortunes have been built up in recent years without any visible foundation that an idea of the legitimacy of such transactions has become far too prevalent. Better the crumbling of a few houses "built of cards" to-day, even at a sacrifice to many innocent persons, than that the number of such houses should be increased until the ultimate and unavoidable collapse would involve the whole financial and business fabric. The lesson to the industrial world is not to attempt an unduly large production with regard to the real capital involved, and to keep in mind the importance of being prepared always for the periods when individual and general prosperity must fall below the high water mark.

With regard to the india-rubber industry in America, the condition of which has been a matter of so much con-

cern abroad of late, it may be mentioned that up to a few months ago the average measure of activity was probably 25 per cent. above a long maintained normal rate, whereas it is now perhaps 25 per cent. below—say 75 now, as compared with 125 last summer. The situation is improving constantly, however, and in our opinion the leading manufacturers would be wise to be prepared for a resumption before long of buying on a very large scale, to make up for the depletion of stocks which has been going on for several months past.

NOW LET EVERYBODY GET RICH.

THE perennial optimism which has been referred to so often as the dominant American spirit we have always thought well founded. It is pleasing, however, to find new evidence in its support. We do not wonder that the recent financial flurry caused so little consternation, even among those so nearly affected. It is because every emergency seems to develop the man capable of meeting it decisively and with despatch. These thoughts are suggested by there having been brought to our attention an opportunity whereby any one who may have lost money through recent declines in value may not only recover it, but becomes ten times richer than before.

Know all men by these presents, therefore, that The Amazon Trading and Development Co. offer the best opportunity yet known for acquiring wealth. Reduced to the last analysis, it is to buy rubber on the Amazon for next to nothing and sell it to manufacturers at more than double the New York price. Could anything be simpler? For proofs we may refer to the prospectus of the company above named, extracts from which follow:

The native prefers trinkets and other merchandise to money (page 8); Mr. Ewing, the president of the company, obtained 200 pounds of rubber for "a 3-pound bag of salt" (page 10); "rubber can be purchased from the natives at a cost not to exceed 10 cents per pound" (page 9)—and so on, *ad infinitum*. In fact, the Amazon region must be full of "easy marks," for Mr. Ewing naively says: "All sorts of advantageous trades can be made with them and at the same time the natives depart in a pleased and happy mood" (page 9).

Now listen: "The best Para rubber is worth in the markets to-day from \$1.50 to \$1.65 per pound" (page 7). The company figure on selling their entire first year's product in the United States at \$1.50 (page 9). All of which works out, to our mind, a profit to the trading company of \$3,086.44 per ton—a profit not to be scorned in panic times or any other.

The company seem to have very special shipping facilities. Their "modern steam vessels," leaving New York or Boston, arrive "in a few days at the headquarters" (page 30)—the town of Egos, 2,000 miles up the Amazon, and still farther. Isn't that going some? The explanation of their being able to sell rubber at \$1.50 must be that their "modern steam vessels" will get back and

unload at high prices several days before the slower boats can arrive with their 75-cent rubber.

Judging from the prospectus, The Amazon Trading and Development Co. appears to consist largely of Mr. L. E. Ewing, a Cleveland (Ohio) lawyer. On page 11 we read of "his rare faculty of deciding quickly when need arises, and his nerve in backing up a decision once it has been made." We hope he has done nothing to be ashamed of, however. The booklet says on page 13: "Mr. Ewing's adventures would fill a book, but they may not properly be recounted here." Mr. Ewing can speak "in Spanish" (page 13); he is "in superb physical condition" (page 14); when he goes to Egos his bed is "a pneumatic rubber affair," and he takes no medicine "to ward off malaria" (also page 14).

Is it any wonder that the business of selling rubber at less than \$1 a pound is threatened? It may not be pleasing to the manufacturers, but if they don't like the situation let them stop manufacturing and get rich by buying shares of The Amazon Trading and Development Co.

N. B.—This is not an advertisement.

BRITISH EXPORTS OF RUBBER FOOTWEAR have become larger than from the United States, though the latter have grown more than ten fold in the last 10 years. Meanwhile the German export has increased, and most other countries in the same field have held their own. All of which indicates that the wearing of rubber shoes is increasing in the non-manufacturing countries, as well as in the countries where such goods are produced, and that the United States, who were the first to export rubber shoes, may not have made the most of the trade to date.

WHAT A FINE THING IT IS for the automobiling interest that the pneumatic tires used are not made to specifications supplied by New York city officials.

IT WILL NOT MATTER SO MUCH if artificial rubber is never produced, so long as workable rubber can be obtained from beets and turnips, mistletoe, and a lot of other plants which may be, after all, capable of being cultivated outside the tropics.

THE NEW YORK TO PARIS AUTOMOBILE TOUR—via Alaska and Siberia—is easily the most spectacular undertaking in its line, but it is not likely to contribute a great deal to tire science. Tires can be exposed to the maximum hard usage of which they are capable in either New York or Paris, and the effect of cold upon tires, and even of ice and snow, can be measured more accurately and generally with more satisfaction on mountains far more accessible than the snowfields on the route of this contest so vigorously press-agented.

IT IS A FACT OF NO LITTLE INTEREST, and it may prove of great importance, that a plant which actually yields rubber is to be found in abundance in a temperate zone. If only one such plant should be found native within such limits, the possibility exists that other species might be introduced there. It is particularly interesting that the plant to which we refer in an article on another page exists in Europe—in regions adapted to scientific cultural methods, if these should seem desirable.

AMERICANS ON THE CONGO.

MR. ERASMUS M. CRAVATH, of New York, recently arrived at home after an absence of several months in the Congo Free State, in connection with the concessions with which the name of Mr. Thomas F. Ryan is identified. Mr. Cravath is insistent that Central Africa is no longer so dark as has been painted, and that it no longer offers any inducement to those in search of thrilling adventures. He had seen no cannibals plying their profession; he had taken with him all the comforts of home and found others; he and his party had gone up the Kasai river in a steamboat of the Ohio river type. Mr. Cravath was interested in finding rubber and studying the labor and transportation facilities, upon which he will reserve his information for an official report to the American Congo Co. He did find rubber, however, and a recruiting officer with him had no difficulty in securing 150 natives to gather rubber, each under a year's contract. Their pay, he said, averaged 8 yards of cloth a month; a good worker might get 10 yards, but they were as a rule indolent and thriftless. In the December INDIA RUBBER WORLD appeared a picture which was based upon a snapshot of Mr. Cravath while at a station on the Congo last summer.

The American Congo Co., by the way, are beginning to figure among the exporters of rubber from the Congo. The steamer *Bruxellesville*, arriving at Antwerp on January 28 with 343 tons of Congo rubber, carried 1150 kilograms [=2535 pounds], consigned to Charles Dethier for account of the American company.

* * *

A LATER arrival at New York from the Congo was Mr. Samuel Phillips Verner, general manager of the American Congo Co., and directing head of the exploration expeditions that have been opening up the territory in the Ryan-Guggenheim concession in central Africa. Mr. Verner reports that the chief problem is not whether the country is rich in rubber and minerals, but the ways and means of getting the hidden wealth out of the back lands and to the railroad and the rivers are what attention will be directed to for some months to come.

Mr. Verner said, in regard to a published report of his party having got into trouble with the natives at one point, such trouble as occurred was experienced by another division of the American party than that headed by him, and that it really amounted to nothing. A missionary, long resident in the country, who accompanied the other party, became frightened at the actions of some natives and fired a gun, hitting one of them. The white men speedily retired from that locality and were not further molested. Mr. Verner denied that any other basis existed for the published report that the whole American expeditionary force was routed. He does not look forward to having any trouble with the blacks in developing the interests with which he is concerned.

* * *

AN Antwerp journal, *La Tribune Congolaise*, published recently the following: "Travelers returning from the Kasai have brought some interesting particulars about the Mohun mission, in regard to which a newspaper at Brussels published a few weeks ago some rather discouraging news, to the effect that the mission had been engaged in a sanguinary struggle with the natives. This news, happily, was very much exaggerated. This mission, made up in great part of Americans, had penetrated a region where the arrival of white men in force had led the blacks to believe the expedition to be directed against them. As a result of this the latter attacked the mission which, to avoid an encounter, turned aside into the eastern province, instead of continuing on its first proposed route.

"Unfortunately Father Dalle, a missionary who was with the Americans, fired a shot from a revolver at one of the native chiefs and killed him. The Father, who asserted that he only acted in self defense, was put under arrest and is now at Leopoldville, awaiting trial."

MR. VERNER looks forward to the use of automobiles for transporting rubber to the trading posts, instead of depending upon the backs of natives, as the Belgians have done. He says that the Congo country is not all jungle country, and that automobile paths can be constructed with little trouble or expense. He thinks that the Congo Free State is destined before long to become a colony of Belgium, and in that event the future success of trading companies there must depend upon the attitude of Belgium toward them. It has been the policy of those having to do with the Congo state hitherto to get all they could out of the country without putting anything into it, instead of seeking to develop the country. He says: "Up to the present time every railroad laid down has been on the cheapest principle and every steamer has been run until it sank. They have gone at the Congo in a hit or miss way that has not profited them a great deal."

BUYING ACTIVE IN NEW YORK.

THE merchants of New York have been greatly encouraged during the past month by the great number of spring purchasers from out of town, and the volume of their purchases. The newspapers about the middle of February reported the presence in the city at one time of about 4,000 out of town merchants, including buyers for important houses, chiefly from the West and South. This number had not been exceeded at the same time in former years, and from all accounts the visitors were buying at a rate equal to the best record of the past. There had been a decrease in the volume of orders, following the financial scare in October, but that promises to be compensated for by the belated business above referred to. Everywhere store shelves have become bare of goods, and they must be filled. And not only are there small stocks of goods in many lines in out of town stores, but the country appears to be financially able to pay for what it wants.

A visiting merchant interviewed by the *New York Times* said most folks out of town did not feel the effects of the so-called October slump in business and would never have known of it only for the fact that New Yorkers themselves crawled to shelter to hide from something that was not going to bother them. He was quoted further as saying that there were no such conditions now as had preceded former panics. The panic of 1893, for example, had followed a big crop failure, at a time when so many farms were heavily mortgaged. Of late crops have been plentiful everywhere, and the farmers have money ahead and no mortgages to carry.

The gathering of so many buyers in the city at one time was due to a certain extent to the reduced rates which The Merchants' Association of New York arranges with the transportation companies at certain seasons, but not nearly all the buyers arriving recently have availed themselves of these rates, with the accompanying restrictions as to time.

THE CURE OF RUBBER HOSE.

A RECENT patent granted to W. H. Adams, of Montreal (British No. 22,410—1906), relates to the manufacture of rubber hose so as to prevent "over-curing" or burning. A bundle of rubber tubes are partly cured in a deflated condition and then coated externally with a kind of cement that will soften when heated. The tubes are then drawn into a woven or knitted covering, the ends are closed, and live steam under pressure admitted to cause the rubber to adhere to the woven material. The tubes are then cooled, and a hollow mandrel is inserted in each, and a covering of rubber is formed on the outer surface of the woven tube. Finally, the hose so formed is fully cured, a wet bandage of fabric being temporarily wound round each length to prevent burning.

The Rubber Plant of Southern Europe.

By Professor Mattei and M. Gustave van den Kerckhove.*

FROM the most remote antiquity a certain plant which is found scattered throughout the region of the Mediterranean, including a considerable part of southern Europe, has been noted for the viscid glue which it exudes. Dioscoride (III, 8); Theophrastus (VI, 4-9); and Pliny (XXI, 50; XXI, 21; XXVII, 3) all speak of it at some length, designating it by the name "Chamaeleon" [Chameleon], because of the different colors it is said to take on, according to the soils upon which it grows. In more recent times other savants have made abundant mention of it, such as Onorio Belli (enclusio Hist. 1601, 301); Fabio Colonna (Euphr. I, 1610, 31); Prospero Alpino (Exot. 1627, 126); Paolo Boccone (Rech. Obs., 1674, 100); and Tournefort (Coroll., 1703, 33).

This species was called by Linnaeus (Species plantarum, 1753, 802) *Atractylis gummifera*. It was classed in the genus *Carthamus* by Lammark (Encycl. I, 1783, 630); transferred to the genus *Learna* by Willdenow (Sp. pl., III, 1800, 1009); and to the genus *Cirsium* by Brotero (H. Lusit. I, 1804, 346); and finally it was placed in the genus *Carlina* by Lessing (Syn. Comp., 1834, 12). Cassini (Dict. 47, 1827, 500) classed it under the head of genus *Chamaeleon*.

Without desiring to engage in any discussion of classification which would take us away from the practical object of this article, we will say that it seems to us that this plant ought to be classified in the genus *Atractylis*; it is therefore justifiable to continue to speak of it by the name given it by Linnaeus.

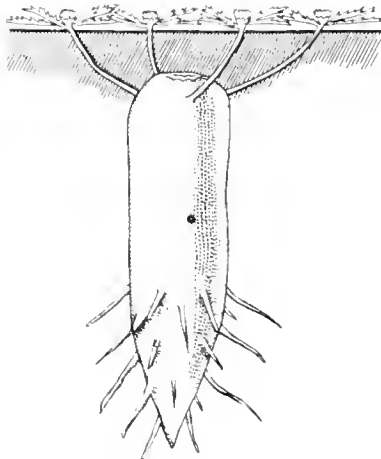
DESCRIPTION.

For its description we deem it proper to repeat that given by Bertoloni (Flor. It. IX, 1853, 62). It is very clear and perfectly accurate, as follows:

The root is fusiform, fatty, full of a resinous gummy sap of an agreeable odor. Leaves, springing from the root, numerous,

large, pale red, feathered or bipinnated. Branches, unequally serrated with strong thorns, long, hard, green, sometimes glossy, shining and crackling; sometimes consolidated, with large, thorny pectinate stems. Trunk, either non-existent or very short, simple, covered with thick leaves like the others, the upper ones indented and serrated on the whole lower edge, thorny and pectinate. Head very large, covered with bracts with thorny toothed leaves, the terminal thorn alternate, of average length. Calyx, hemispherical with scales lanceolate lined, extremities in tufts or masses terminating in thorns, the edge being without thorns, the upper ones not glossy and of a purple red. Corollas, purple, with a long, slender tube, divided on the edge into five parts with linear points and sharp hairs. Fruit, yellow, covered with hairs and with a very short stamen. Stamen, very long, white, shiny, with hairs fastened together at the base. Receptacle, thick, yielding drops of a resinous gum which coagulates on contact with the air; of agreeable odor.

The paleae of the receptacle have undivided articulations or are united and cut at the point.



"ATRACTYLIS GUMMIFERA."

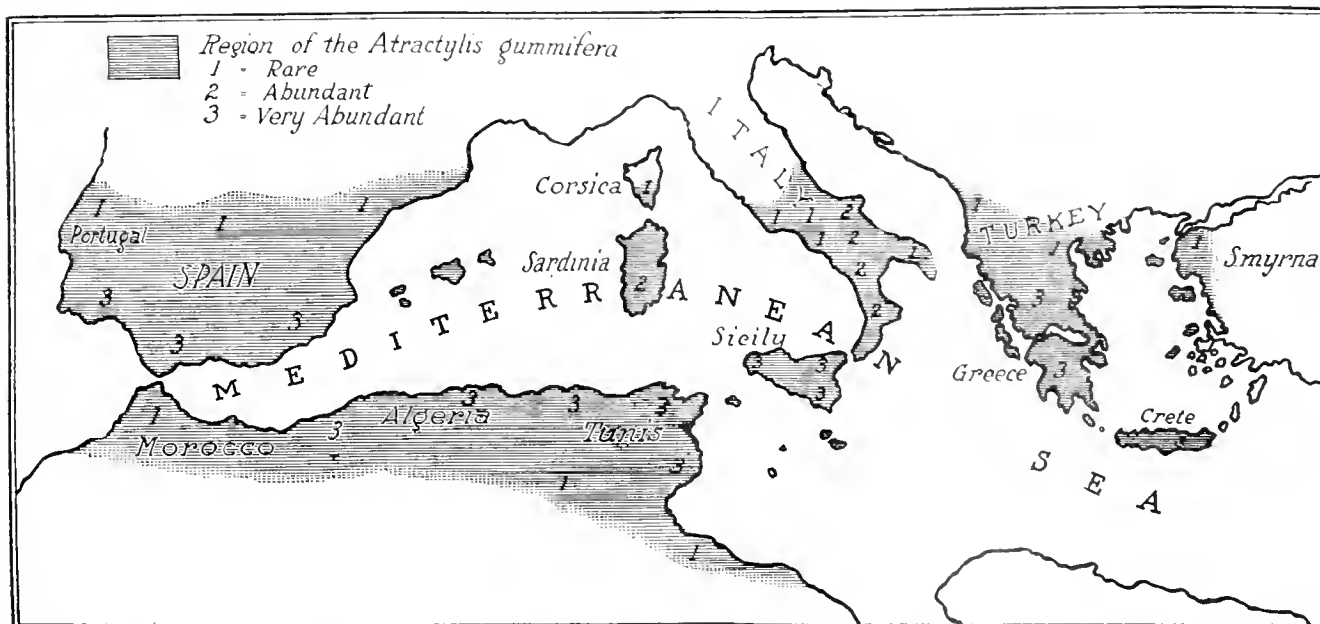
[The Rubber Plant of the Mediterranean Region.]

GEOGRAPHICAL DISTRIBUTION.

The *Atractylis gummifera* is frequently found in continental Italy, in the Abruzzi, Maleda, Favoliera, and even as far as the southern extremity of the peninsula. It is found particularly in Gargano and Sila, as is mentioned by Tenore (H. Neap., II, 1820, 194). It is very common in Sicily; Gussone (H. Lic., II, 1843, 434) says that it is found everywhere; it is also common in Sardinia as mentioned by Morio (H. Sard., II, 1840, 430). In Corsica it was remarked by Grenier and Godron (H. France, II, 1850, 270), and at Malta by Grech Delicata (H. Melit., 1853, 20).

It is very common throughout the Peloponnesus and also grows in Asia Minor according to Boissier (H. Orient, III, 1875, 450); in Greece it is found, particularly in Epirus, Beotia, Attica and Laconia, as is

*Professor Mattei is connected with the botanical garden at Palermo, Italy, and Monsieur van den Kerckhove, of Brussels, is widely known as an expert in rubber.—THE EDITOR.



mentioned by Halesy (H. Graec., II, 1902, 94); according to Heldreich (H. Cephal., 1887, 26) it is not rare in Cephalonia. In Crete it is found in abundance, as has been remarked by Tournefort (Coroll., 1703, 33), and confirmed by Raulin (H. Cret., 1860, 483).

It is also found generally in southern Spain, according to the statements of Willkomme and Lange (H. Hisp., II, 1870, 131), and in Portugal, according to Colmeiro (Plant. Hisp. Lux., III, 1887, 287).

In regard to northern Africa, Desfontaines (H. Atl., II, 1800, 252) has declared it to be abundant in Morocco, Tunis, and Algeria, and as to the latter country he is corroborated by Bataudier and Trabut (H. Alg., 1888, 486); as to Tunis, Bonnet and Baratte (Cat. Tunis, 1846, 234) say it is common in the north and the center, as well as in the land of the Kroumirs, but more rare in the south.

In continental Italy it lives in the chalk hills, while in Sicily it grows in remote dry fields, or in the sun, near roads; in Sardinia in fields near the sea. In the Peloponnesus it is said to grow in uncultivated fields and at the roadside; in Spain it is found in miry places, on the borders of fields and roads. In northern Africa we are assured it likes uncultivated places, open to the hot sun, particularly fields, brushwood beside the highways, and on the slope of hills.

We know it to be common in Sicily, particularly in open, sunny spots by the sea and even to a remarkable height in the mountains.

USES.

From remote times, the gum which exudes from this plant has been known. Fabio Colonna (Eph., I, 1613, 3) said on this subject: "Guardians of herds gather the gum produced in the corolla and between the thorny leaves of the calyx and call it 'wax of cardo,' for it becomes hard like wax and they use it as a paste or glue. It does not stick so quickly as birdlime and stretches out in white filaments resembling milky sap, and hardens like wax; then it turns black."

Onorio Belli (en clusio Hist., 1601, 301) describes a curious practice existing at that time in Crete. "The children," said he, "gather the gum and chew it, then they press it in their fingers and roll it into a ball which they squeeze in their hands so as to cause it to burst with a noise; they amuse themselves a great deal with this sport." This practice still exists in Sicily, as Mr. Teodosio De Stefani assures us, and it is curious to compare this method with that first employed by the Mexicans to extract rubber from the guayule plant. From this habit, prevalent among the Sicilians, of chewing the gum of the *Atractylis gummifera* a long time to free the rubber from the resins which it contains, its name masticogna is perhaps derived.

The rubber thus obtained being quite pure, they dissolve it in spirits of turpentine to make a sort of birdlime, by means of which they catch birds; this is the practice, not only in Sicily, but also in the whole region of the Mediterranean, as the authors above quoted point out.

ANALYSIS.

The idea that the *Atractylis gummifera* might contain rubber was suggested by information obtained from an article in the *Gazette Chimique Italienne* (Italian Journal of Chemistry) on *Atractylis gummifera* (XXXVI, 1906, 636) by Professor Angelico, who had made some investigations for another purpose. The direction of the botanical garden at Palermo drew the attention of Dr. Edward Marckwald, of Berlin, to the subject. He corroborated the assertion that the gum of this plant contains a great deal of rubber. His analysis follows:

Lost by drying.....	4.24 %
Mechanico-organic substances.....	1.40 %
Albuminoids.....	4.07 %
Inorganic substances.....	2.31 %
Resins.....	51.52 %
Rubber.....	36.46 %
Total.....	100.00 %

Dr. Marckwald expressed the opinion that there is a brilliant industrial future awaiting *Atractylis gummifera*, being of the opinion that it would be easy to extract from it a merchantable product. At our request, and for the purpose of confirming this result, other analyses were made by Michelin and Torrilhon, French firms of note in the rubber manufacturing field, who found the percentage of rubber below that shown by the first analysis. It should be added, however, that these latter analyses were made from very impure raw material, just as it is obtained from the plant, and not from carefully selected material, as the former one had been. Nevertheless, the quantity of rubber obtained in the latter tests is high and sufficient to encourage the development of the plant.

The house of Michelin obtained from their sample the following result:

Ash.....	2.57 %
Rubber.....	22.92 %
Residue.....	23.09 %
Soluble Resins.....	51.42 %
Total.....	100.00 %

This analysis was accompanied by the following remarks: "In order not to injure the rubber in the preliminary drying we operated the product just as we obtained it, so that in our analysis the water that may have been contained in the raw material has been reckoned in by difference with the vegetable residues or insoluble minerals. The other three figures were obtained directly." This analysis shows the product to contain a certain quantity of rubber, but mingled with at least double its own weight of resin.

The house of Torrilhon, on their part, wrote: "The density of the sample is 1.037 at 15° Centigrade [=59° F.] A treatment with boiling water removed from it 4.18 per cent. of a substance which, after the evaporation of the liquid part, is hard, brittle and of a brownish color. It is made up of albuminoids which do not coagulate in boiling water. In the insoluble part are found albuminoids which were coagulated by boiling water; this substance is whitish and possesses a certain elasticity which disappears after a few days. It is soluble in petroleum ether, leaving an insoluble residue which forms 6.14 per cent. of the substance washed. This residue is made up of albuminoids which coagulate in boiling water and of the remains of vegetable matter. In the solution made by petroleum ether acetone precipitates a substance, darkish on the outside, whitish on the inside and elastic. This is the rubber and it forms 22.965 per cent. of the total product. The evaporation of the mixture and of acetone gives a yellowish dense resin, which makes up 55.232 per cent. of the substance washed. To sum up, the following is the result of the analysis:

Insoluble matter.....	6.140 %
Rubber.....	22.965 %
Resin.....	55.232 %
Water.....	15.663 %
Total.....	100.000 %

CULTIVATION.

The *Atractylis gummifera* is a plant apparently without a trunk, pushing out leaves down to the ground, opening out like a rose and having large clusters of flowers; on these latter in particular are produced, by the work of a lepidopterous caterpillar which perforates them, numerous drops of gum, variable in size, and easy to gather. But the greater part of the plant is found underground, where it has a trunk of enormous dimensions, often a yard or more in length, cylindrical in form, 8 inches in diameter, and weighing at maturity from 20 to 40 pounds.

The upper part of this trunk is divided into several very slender branches with numerous buds; each branch ends in a crown of flowers. The trunk contains a quantity of perfectly white, acrid latex which coagulates slowly in the air, forming a gum rich in rubber.

To sum up, the natural supply of *Atractylis gummifera* in the

whole Mediterranean region might be utilized by gathering the gum which exudes from the clusters of flowers, or by causing a flow through incisions made at a proper time; but we think the largest result would follow the manipulation of the roots, which might be handled by machinery and treated by washing, as is done in the case of the rubber plant and also of the guayule in Mexico.

When we take into consideration the hundreds of square miles covered by the *Atractylis gummifera* and the enormous size of its underground trunks, it must be conceded that large quantities of rubber could be extracted from them, and that it would be justifiable to set up a plant to recover it. Years would pass by before the natural supply in the Mediterranean region would be exhausted and in the meantime, nothing would prevent suitable cultivation of the *Atractylis gummifera*.

In fact, this plant which grows and thrives naturally in the Mediterranean region, preferring a dry soil and resisting the longest drouth, is far safer to cultivate than many other foreign plants which give a better yield, but are not yet acclimated in southern Europe. The cultivation of the plant would not be very costly; we could from experience point out an easy means of propagating it. The slender branches which are found almost on a level with the soil and which bear numerous buds could be removed and set out. These cuttings take root rapidly, while the buds develop leaves, so that plants are rapidly produced which in a few years yield new trunks.

We do not consider that the gum of the *Atractylis* could take the place of rubber even of average quality, but from the experiments which we have caused to be made and from our study of the subject we believe this gum to be adapted to mix with rubber, as are those of guayule, pontianak or almeidna. We propose to recur to the subject later and show the part that *Atractylis gummifera* might eventually play in the rubber industry.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha, for the month of December, 1907, and for five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
December, 1907	\$107,013	\$114,285	\$300,336	\$522,534
January-November	1,204,460	1,532,595	3,043,744	6,470,799
Total, 1907	\$1,302,373	\$1,646,880	\$3,044,080	\$6,093,333
Total, 1906	1,102,751	1,213,196	3,282,050	5,658,666
Total, 1905	1,182,701	1,380,220	2,833,511	5,495,408
Total, 1904	800,076	1,220,772	2,341,030	4,457,887
Total, 1903	857,034	991,351	2,511,080	4,369,665

The number of pairs of rubber boots and shoes during the past four calendar years has been as follows:

1904	2,301,803	1906	2,200,116
1905	2,585,868	1907	3,181,865

To record the growth of the exports of rubber footwear for a greater number of years it is necessary to present the figures for fiscal years (ending June 30), the details being as follows:

Pairs.	Pairs.	Pairs.
1801-02... 231,105	1896-97... 306,026	1901-02... 2,594,708
1802-03... 410,950	1897-08... 391,832	1902-03... 2,307,401
1803-04... 261,657	1898-00... 486,586	1903-04... 2,310,808
1804-05... 383,793	1899-00... 767,104	1904-05... 2,300,539
1895-06... 350,713	1900-01... 1,459,100	1905-06... 2,603,670

IMPORTS INTO THE UNITED STATES.

OFFICIAL statement of values of manufactures of india-rubber and gutta-percha, for three calendar years:

	1905.	1906.	1907.
India-rubber	\$1,638,897	\$2,389,082	\$2,154,425
Gutta-percha	105,274	240,267	141,535
Total	\$1,744,141	\$2,629,349	\$2,295,960

BRITISH RUBBER FOOTWEAR TRADE.

THE exportation of rubber footwear of British manufacture has shown a steady increase of late years, until now that country seems to lead the world in that branch of trade. The following figures relating to such exports for the last three calendar years, are based upon official returns:

	1905.	1906.	1907.
Number of pairs	2,373,732	3,015,624	3,610,956
Value (sterling)	£230,403	£288,852	£343,223
Value (U. S. money)	\$1,150,455	\$1,405,008	\$1,670,295

British returns are not available of the imports of such goods. United States returns for several years past have shown a steady decrease in the number of pairs exported to Great Britain, but these figures relate in part to goods ultimately reaching continental Europe, and the total consumption of American rubber shoes in Europe increased from 819,122 pairs in 1901-02 to 1,807,346 pairs in 1906-07.

RUBBER FOOTWEAR IN FRANCE.

FRANCE appears to be losing ground in respect of rubber footwear. In the returns of French "special" commerce for three years past these figures occur regarding *chassures* of caoutchouc, indicating values:

IMPORTS.

In 1905	3,030,000 francs [= \$702,327]
In 1906	4,001,000 francs [= \$772,193]
In 1907	5,364,000 francs [= \$1,035,252]

EXPORTS.

In 1905	1,535,000 francs [= \$286,255]
In 1906	1,117,000 francs [= \$215,581]
In 1907	820,000 francs [= \$159,997]

AMERICAN RUBBER GOODS IN BRAZIL.

THE Brazilian congress has voted to continue during 1908 the 20 per cent. reduction on import duties in favor of certain products imported from the United States, including rubber goods. The general tariff rate ranges from 1 milreis per kilogram for machinery packings to 5 milreis for more fanciful goods—canes, whips, and the like. The rate on footwear is 3 milreis per kilogram; hose, $1\frac{1}{2}$ milreis; hard rubber goods, 4 milreis; and so on. Elastic goods, especially where silk is included, are charged as high as 30 milreis. On articles not specified in the tariff schedule an *ad valorem* duty of 50 per cent. is imposed. Sixty-five per cent. of all duties is payable in gold [1 milreis = 54.6 cents], and the remainder in the depreciated paper milreis worth lately about 30 cents. The full rate, expressed in United States currency per pound, works out, for each milreis per kilogram, at nearly 21 cents a pound. Thus, 1,000 kilos of packing would have to pay 1,000 milreis [= \$461.35], equivalent to \$209.24 per pound. The rate on footwear is three times as high, and so on. The rate on American goods, as above stated, is 20 per cent. lower.

CACAO is exported to a considerable extent down the Amazon river, much of it through houses identified with the rubber trade, as Schrader, Gruner & Co. and Scholz, Hartje & Co. of Pará and Manãos. The total for 1907 was 3502 tons, about three-fourths going to Europe. The figure for 1906 was 2105 tons and for 1905 it was 4263 tons. Back in 1891 the exports were 6562 tons.

THE United States consul at Iquitos reports the beginning of a that the large increase in the imports of Brazilian rubber into Germany appears to be due to the recent establishment of a direct steamship line between Hamburg and Amazon ports. The imports of Brazilian rubber increased from 1,800,000 marks in 1902 to 20,000,000 marks in 1906.

The Gutta Percha and Rubber Manufacturing Co. (New York) announce the permanent location of their San Francisco branch at Nos. 67-69 First street.

The Manhattan Factories To-day.

THAT the factories of the Manhattan Rubber Manufacturing Co., at Passaic, New Jersey, have grown and grown, most of us know, but how thoroughly equipped the company is with up-to-date buildings and machinery cannot be realized until one spends a day in going over the various departments.

The power plant, of course, is the starting point, where are found a battery of 9 boilers of the Sterling-Maxim type, giving some 2000 H.P., the fuel coming from a huge coal trestle located a short distance away. The engine rooms, of which there are two, are equipped with one 450 H.P. Fitchburg, and one 750 H.P. Allis-Chalmers engine, together with feed pumps, fire pumps, and dynamos, one of 100 H.P. and one of 250 H.P., used for lighting and for driving special machines and departments in distant parts of the factory.

The washing room, which is close to one of the engine rooms, contains 6 large washers set in a cement floor, above it being a spacious room for air drying rubber, while on the same level and not far away are placed two No. 5 vacuum driers when quicker results are desired. Entering the mill proper from the engine room one passes through a department devoted to a special line of rubber work, where are 6 grinders, 1 calender, 2 big presses, and 2 vulcanizers. Across the way is a press room for belts that at once takes the eye because of its completeness and wise arrangement. Here are two 35 foot and two 20 foot belt presses, 5 combination presses, and one for extra heavy work, on which a pressure of 2500 pounds to the square inch is secured.

A feature of this equipment is the fact that the platens of the presses are all covered with asbestos mortar to prevent radiation, and that each press is equipped not only with recording gage, but with an automatic regulator for heat and pressure. Just above this is the belt making room, run by electricity, the whole lighted with huge windows of hammered glass. On the same floor is the cotton hose room, containing not only braiders and twistors but 5 looms.

The largest single room in the factory is 420 feet long and 70 feet wide, with a monitor roof. Here is the hose department, containing some 30 hose tables and two 50 foot vulcanizers. On one side of this great room is a department for the manufacture of horse-shoe pads, while on the other is one for the making up of tiling and matting and for lining fabrics. Returning to the ground floor, a department of much interest is that devoted to the manufacture of couch and squeeze rolls. This is thoroughly equipped with huge lathes, grinders, and other heavy

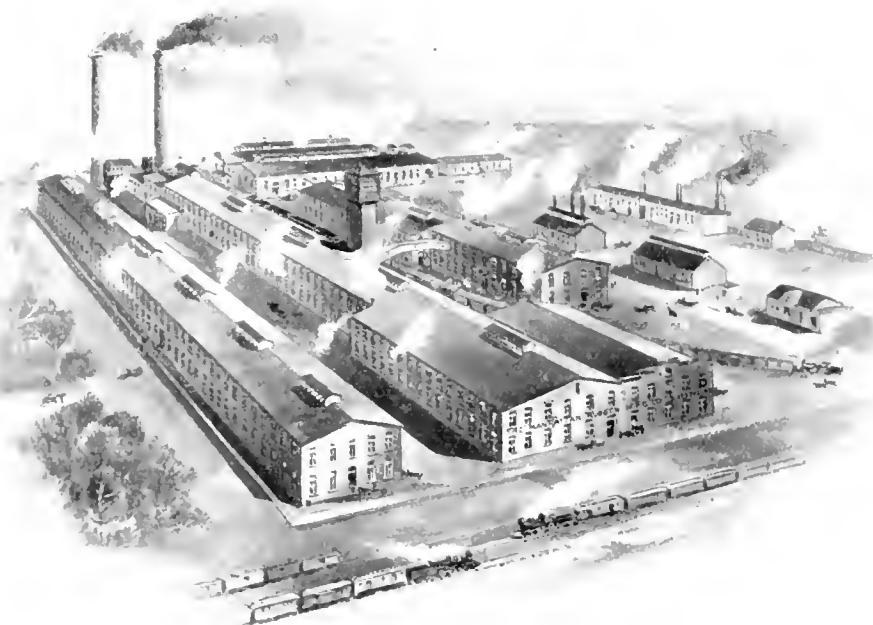
machinery necessary for this work. Close to this department, and taking up most of the ground floor of the main building, is the general mixing and calendering room. Here are 23 grinders and 5 calenders, together with the usual accessories, such as duck driers, machines for brushing liners, etc. Of other equipment in the factory, there are 10 tubing machines, 20 vulcanizers, 40 presses for small mold work, and what is said to be one of the widest hydraulic presses ever made, its dimensions being 10 x 10 feet.

A year or more ago the offices of the company were removed from New York to an end of the main factory. A new office building close to the factory is planned and will be erected in the spring. The plant to-day contains about 125,000 square feet of floor space, and is employing 420 men, the maximum number that have been employed being 540. The factory is situated excellently for shipping, having its own siding from the Delaware, Lackawanna and Western railroad, along the line of which the company owns some 15 acres of land.

A very practical improvement is an installation of the Bowser system of handling naphtha. With a main supply home in the yard, the volatile fluid received in tank cars is transferred to a large storage tank and piped to all parts of the factory when needed.

One of the most interesting departments of all is the laboratory, which is housed in a brick building sufficiently removed from the plant proper, containing experimental rubber machinery throughout and an exceedingly complete laboratory equipment, all the machines being operated by electricity.

The name Manhattan at once suggests the very pleasant knowledge that the trade have, both of the Townsends and the Hendersons, two of each name—young, aggressive, friendly, who have built up these great factories, not with knitted brow and portentous frown, but with a cheerful smile as if each day's work was a game that all played for the love of it.



FACTORIES OF THE MANHATTAN RUBBER MANUFACTURING CO.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

ACCORDING to the head of one of our largest rubber factories the trade is in a flourishing condition at present. American difficulties, although they have undoubtedly had an effect upon financial matters generally, have helped the rubber trade in bringing down the prices of raw materials and any tears

THE STATE OF OF TRADE.

which have been shed on this side with regard to the reported closing down of several factories in America are mostly of the erecible order. My informant in the course of his conversation said that the position of the British rubber trade is better now than it has been for five years. No doubt this is an opinion derived from long experience, and I have no wish to attempt any refutation. All the same, it seems to be generally admitted that we are in for a period of depression all round which must surely cause a reduction of orders. On the other hand, as rubber goods are in so many cases a necessity rather than a luxury, the price of the goods does not always affect seriously the volume of trade. Purchasers may grumble at the high price, but they go on buying rubber goods because they cannot see their way to do without them. When zinc and lead oxides were high metal mining received a stimulus and various new enterprises were started in Great Britain; at present prices, however, it is very difficult to attract new capital as in many cases to make a profit on what was so freely subscribed a year ago. This means a decreased demand for certain classes of rubber goods, though of course it is not a very important matter. To turn to another matter I may say that I have been solemnly informed that the low price of raw rubber is due to Mr. Fenton's discoveries of artificial rubber, and that this is adversely affecting the plantation share market. It seems a pity that some recent editorial remarks on this topic have not had a wider circulation. Of course the low price of Para rubber has had an adverse effect upon Africans and I am told by a friend in the West African produce trade that there is absolutely nothing doing in rubber. Presumably the guayule interests must have suffered, as I am informed from an American source that there is very little money in making and selling the resin-free product, having regard to the chemical processes necessitated, and as for the stuff containing 22 per cent. of resin there is no great demand at a time of general low prices.

A book under this title by Dr. Luigi Settimi, of Rome, was reviewed in the December issue of THE INDIA RUBBER WORLD. I

CAOUTCHOUC E GUTTA-PERCHA.

know nothing of the author, but have formed the opinion that he is a practical chemist who has followed the scientific investigations which have been made upon rubber in recent years. Where he writes upon the chemical and physical properties of rubber and upon the analysis of raw and manufactured rubber he is lucid, interesting, and up-to-date. With regard, however, to the bulk of the book, if we leave out the botany which is common to all authors, there is little that is favorable to be said and it would be interesting to know what is thought about the book at Pirelli's works, so near to the publishers at Milan. To illustrate the incompleteness of the book it may be mentioned that all we are told about carbonate of magnesia is that it occurs in nature as magnesite and in combination with lime as dolomite. This is hardly sufficient in a book designated a practical manual of the trade. With respect to the descriptions of manufacturing processes these are so abbreviated and in many cases so much out of date that it seems to point to the author being in difficulties with his subject. Driving belts we are told are made in a similar manner to motor tire covers, which have a three line reference. The hollow ball manufacture is correctly given up to the point of vulcanization

which is stated as 100° C. (212° F.). Waterproof cloth is said to be spread with a solution of rubber in essence of turpentine and carbon bisulphide with 50 per cent. of alcohol; surely this solution is not in general use anywhere at present. Nothing is said in the book about Macintosh's principal discovery and his name only occurs in connection with patents referring to celluloid and gutta-percha. Of course there must necessarily be limits to the information given in such a small book, but to my mind too much space is occupied by worthless gleanings from the patent files to the exclusion of more interesting and important matters. Dr. Settimi has evidently a close acquaintance with the scientific side of his subject, as seen by his references to English, French, and German chemists, and it is a pity that he has not written the more practical parts of his book in such a way as to indicate that he possesses a knowledge of the subject matter at first hand.

As an *addendum* to the notice of the death of Lord Kelvin, in the January issue of THE INDIA RUBBER WORLD, I may say

THE LATE LORD KELVIN.

that I was present at the impressive funeral in Westminster Abbey when the great scientist was laid near to Sir Isaac Newton. I do not propose to enter here into any account of the deceased's numerous and important contributions to science generally, but reference may be made to the fact that the physical experiments made in india-rubber by Joule and published in the *Philosophical Magazine* for 1857, were first suggested to Joule by Lord Kelvin, the latter having himself done some pioneer work in that direction. At that time, of course, Lord Kelvin was plain Mr. William Thomson, or rather Professor Thomson, becoming not so long afterward Sir William Thomson. With regard to nomenclature, Sir William has been confused by some authors with Mr. William Thomson, an analyst of Manchester, who has done some research work on rubber goods and whose papers are to be found in one or two scientific journals.

I HEAR that The De Nevers Rubber Tyre Co., whose works are situated at Earfield, near Wimbledon, is about to be turned into a limited company, with the Count De Nevers as managing director. The present works were started four or five years ago, when the firm changed its name from the New York Wheel and Rubber Tyre Co., and its habitat from Upper Kensington road, London. The De Nevers tire, which is supplied to the trade through Messrs. Liversidge, of London, is of the solid type, having the surface deeply notched at intervals so as to increase the grip, and undoubtedly has proved a success. Among recent large purchasers are Harrods Stores, Limited, all their automobile delivery vans now having them fitted, and Messrs. Carter, Paterson & Co., Limited, the well known London carriers who have substituted motors for horse traffic to a considerable extent.

UNDER the headline of "A New Insulating Pitch" THE INDIA RUBBER WORLD for November has an article on Coalite. With regard to this pitch, which it appears

ELECTRICAL NOTES.

has been favorably reported upon by Sir W. H. Preece, what we should like to know is where it is to be found. Since the British Coalite Co., with its £2,000,000 capital, was formed, there has been a dearth of information as to what is being done. The idea that the patent has any real value is scouted by the bulk of engineers and it is perfectly certain that close competition will arise as soon as the preliminary work of getting the public to use coalite instead of coal has been accomplished.

Stearine pitch prepared in a special way has recently been patented by J. Connolly. Messrs. Connolly Brothers, it may be

mentioned, are an old established firm of rubber cable makers whose works are at Blackley, near Manchester. With regard to this stearine pitch, for a long time it was used exclusively by a single firm under the name of bitite, but now its employment has become very general among insulated wire manufacturers.

Looking at the future it seems pretty clear that insulation will be required less than in the recent past. The modern tendency is the employment of increasingly high voltages and for these currents bare copper conductors are used. I heard recently of some very important projects being put in hand where pressures of 10,000 to 20,000 volts will be used. The conductors will be bare copper, though for switchboard and various other connections where insulation is necessary rubber insulation will be used to the exclusion of pitch or fiber.

THE rubber expert has long been with us, but in the past he has always been associated with the manufacture of rubber goods.

RUBBER EXPERTS.

Nowadays, however, the rubber expert who comes before the public ken is either a botanist or a planter, or perhaps he has no particular claims to be considered as either of these. The new expert is to be found in the neighborhood of Mincing lane or in the localities where certain groups of capitalists have their offices. I am referring to this topic because it is clear that in the future the rubber expert must be particularized. I am not too fond of the term expert myself, but where I may think it applicable in the case of a man who has been in the trade for 20 or 30 years, I certainly object to its use by those whose acquaintance with rubber is only a year or two old. In England at present the younger son goes to a rubber plantation, whereas at an earlier date oranges in Florida or prunes in California were his destiny. But not to generalize too much, I have been induced to make these remarks from hearing one of the newest Mincing lane experts say that a certain man well known in the rubber trade could not be an authority because he, the speaker, had never heard of him. At this rate the master minds who are controlling our large rubber factories are evidently to rank nowhere compared with the young planter or the man who has a rubber growing concession to sell in the city. I suppose there are extremely few people who can claim to be experts in both rubber growing—including in this term botany—and in the manufacturing of rubber goods, and it certainly seems desirable that experts should be referred to as belonging to one or the other branch.

* * *

R. & J. DICK, LIMITED.

A COMPANY with this name has been formed to acquire and carry on the business of R. & J. Dick, manufacturers of gutta-percha soled boots and shoes, balata belting, gutta-percha horse-shoe pads, etc., at Glasgow, Scotland. The capital is £650,000 [\$3,163,225], divided equally into 5½ per cent. cumulative preference shares and ordinary shares. The business was started about 60 years ago by two brothers—Robert and James Dick, who died respectively in 1891 and 1902, each leaving a large fortune apart from his share in the business. The business has been owned and conducted of late by a number of partners, five of whom will be interested in the new company. John Edward Audsley, connected with the business for 40 years, will be managing director. The profits for five years past are stated to have averaged £65,122 18. 11d.

Regarding the Dick balata belting, the prospectus of the new company says: "A factory was specially built for making the belts, and the machinery is of the most complete character, being largely the invention of the original partners, subsequently developed by their technical staff. The belting, which is of great strength and durability, is, in the course of manufacture, treated with a special solution of balata. Though the patents expired some eight years ago, the belting, in spite of competition, maintains its position both in the home and foreign

markets, and the sales have continued to expand from year to year, the turnover for the last eight months exceeding all previous records for the same period."

CABLE FOR THE CARIBBEAN SEA.

THE India Rubber, Gutta Percha, and Telegraph Works Co., Limited, have contracted to build and lay a cable between Puerto Colombia (Savanilla), Colombia, and Kingston, Jamaica, there to connect with the lines of the Direct West India Cable Co., Limited. The new line is building for the Caribbean Anglo-Colombian Cable Co., Limited, just formed, with £200,000 [=\$973,300] capital, to acquire certain exclusive cable privileges granted by the republic of Colombia, for the period of 50 years. The board of the new *concessionaire* company is headed by Baron Georges de Reuter, director of Reuter's great telegraphic news service.

BRITISH COMPANY NOTES.

SUPPLEMENTAL to the list of British firms mentioned as making balata belting, in the last INDIA RUBBER WORLD (page 150), it may be said that the New Motor and General Rubber Co., Limited (London and Harpenden), announce that they are prepared to supply this line of goods.

Engelbert Tyres, Limited, is the name of a company organized for the sale in Great Britain of tires made by the important Belgian house of O. Engelbert Fils & Co., of Liege. These tires will be carried in stock in the leading British centers.

Torkington Tires (Parent Syndicate), Limited, registered in London January 14, 1908, with £3150 capital, to adopt an agreement with A. Torkington and carry on the business of making tires and other rubber goods.

The Clipper Pneumatic Tyre Co., Limited (Birmingham), a selling and not a manufacturing company, report a net profit for the year ending August 31, 1907, of £20,399 [=\$116,947.34], and a dividend for the year of 7½ per cent. absorbed £4878. In view of the expiration of certain arrangements for the sale of foreign tires and the expected resulting diminution of profits, the company have devoted a large amount of their reserve to the writing off of good will and trade mark accounts, with a view to strengthening the position of the company.

The accounts of George Angus & Co., Limited, leather and rubber manufacturers at Newcastle-on-Tyne, show net profits for 1907 of £26,934 [=\$131,074.31]. The dividends declared for the year on the ordinary shares amounted to 10 per cent. The rate has been at least 10 per cent. for ten years past, though for some years the profit has been larger than in 1907, and during four years of the last ten the dividends amounted to 12½ per cent. The dividend on the preference shares is 5 per cent.

At the annual dinner of the staff of the Anchor Cable Co., Limited, at Leigh, it was stated that existing contracts would keep the plant working full time at high pressure until the end of this year, at least. The company is now under control of Callender's Cable and Construction Co., Limited. They are mentioned as having booked orders lately from the German navy and secured contracts in Japan.

The New Gutta Percha Co., Limited, register the discharge in full of debentures dated July 17, 1906, for £13,500 [=\$65,697.75]. The company are engaged in exploiting Gentsch's artificial gutta-percha under the British patents.

GERMANY.

THE dividend of the Mitteldeutsche Gummiwaren-Fabrik Louis Peter, Actiengesellschaft (Frankfort o/M.) for the last business year amounted to 16 per cent. The disbursement was 480,000 marks [=\$114,240], the capital being 3,000,000 marks. The net profit for the year was 1,070,377 marks [=\$254,749.73].

The hose and rubber goods industry of B. Polack, at Walters-hansen, has been organized into B. Polack, Actiengesellschaft, with a capital of 1,200,000 marks [=\$285,600]. Max Polack is the first director, holding 500,000 marks in shares in the new company.

The News of Rubber Planting.

THE INTEREST OF THE SCOTCH IN RUBBER.

WHILE London naturally is the center of British interest in rubber planting, the people of Scotland have been particularly attracted to this field of investment, and a considerable number of British rubber companies have their headquarters in Edinburgh. Not so long ago THE INDIA RUBBER WORLD devoted a page to a sketch of Mr. H. K. Rutherford, who probably stands first as regards the extent of his interest in rubber planting among Britishers. Mr. Rutherford is a Scotchman and it is probable that his success in rubber has done much to encourage his fellow countrymen to invest their capital in the same business. The Scotch are proverbial as cautious investors, and the fact that people of that country have put so much money into rubber is among the best indications that this is a safe and sane business.

The latest rubber planting enterprise organized in Scotland is the Anglo-Sumatra Rubber Co., Limited, with £60,000 [= \$437,985] capital authorized, and formed to acquire certain coffee and rubber estates in Sumatra, with the idea of making rubber ultimately the principal product of the company. There are now planted on the estates 157,214 rubber trees, of which 121,214 are *Hevea* and the remainder *Ficus elastica*. The directors of the new company are for the most part experienced in rubber planting in Ceylon and Malaya, and the fact that they are becoming interested in Sumatra is worthy of note as intimating the advantages which this island offers for rubber culture as regards soil, climate, and labor conditions. It is to be noted that the new company has been financed in Scotland. The capital offered to the public was largely over-subscribed.

THE PROFITS OF RUBBER PLANTING.

THE London correspondent of *The Times of Ceylon*, mentioning the number of Ceylon men who appear in the British metropolis evidently in particularly good circumstances, due to successful investment in rubber planting, refers to one fortune in this line, estimating on present share prices, of £250,000 [= \$1,216,625], and he says there are others who would require an equal number of figures to express the sums which they have taken out of rubber. The correspondent mentions in this connection Mr. Edward Valentine Carey, who has returned to England a very rich man and has settled on a fine place in Devonshire, having made a fortune in rubber after a period not so many years ago when the world looked far from bright for him. THE INDIA RUBBER WORLD devoted a page to a portrait and sketch of Mr. Carey January 1, 1905 (page 108).

Mr. James Wilson, of England, chairman of the Ceylon Land and Produce Co., on seven of whose plantations 5095 acres have been planted to rubber, after a recent visit to Ceylon, expressed the opinion that rubber planting will pay for many years to come. He thinks that the price ought to rise a bit when the money market resumes its normal condition, but not to the high prices of a year ago.

A planter from Ceylon who visited England lately reports an interview had with one of the directors of the India Rubber, Gutta Percha, and Telegraph Works Co., at Silvertown, who expressed the opinion that rubber planting would be a good investment for the next 20 years, at least. The rubber manufacturer felt that if rubber remains as cheap as now a marked increase in its use would result.

Referring to the value of rubber plantation property, *The Times of Ceylon* suggests that £100 [= \$486.65] per acre would be a moderate price for six year old well-grown rubber.

RUBBER PLANTING IN THE DUTCH EAST INDIES.

THE Rubber Growers' Association, organized in London last year under the chairmanship of Mr. H. K. Rutherford and mentioned from time to time in these pages, has extended its scope

until it embraces committees not only for Ceylon and Malaya, but also for Southern India, Sumatra, Java, and Borneo.

An association of planters has been formed at Bandjar, Central Java, with a view to the extension of rubber cultivation throughout that island. A late report was to the effect that with the completion of planting then in progress there would be 9025 acres under *Hevea* in the Bandjar district alone by the end of February, and it was estimated that 825 acres more would be planted during the year.

The number of rubber trees planted in Sumatra is estimated by a correspondent of the *Ceylon Observer* at 2,000,000, representing about 14,000 acres. Three rubber trees 19 years old on an old coffee plantation are reported to have yielded over 5 kilograms [= 11 pounds] each in one year.

Another new flotation is that of The Langkat Sumatra Rubber Co., Limited, with £75,000 [= \$364,987.50] capital, registered in London January 17 to acquire certain rubber plantations in Sumatra and to plant additional rubber thereon. The prospectus points out that 1 pound of rubber annually per tree, selling at a profit of 1s. 6d. per pound, would yield an annual dividend of over 25 per cent.

WHAT IS DOING IN MEXICO.

THE United States consul general at Mexico City, according to the *Mexican Herald*, recently made a tour of the isthmus of Tehuantepec, reporting the rubber planting interest there as flourishing. It is stated that he made arrangements at three plantations on which he found tapping in progress for details as to results, with a view to embodying these in a forthcoming official report.

The *Mexican Herald* notes the presence in Mexico of a party of officers and stockholders of the Ohio Rubber Culture Co. (Canton, Ohio), on a visit to the company's plantation "Capocan," adjoining the "Rubio" plantation of the Tehuantepec Rubber Culture Co. Mr. G. S. Pike, secretary of the company, reported about 1,200,000 planted rubber trees on the estate, which number it is planned to increase to 3,000,000.

PLANTING CONDITIONS IN WEST AFRICA.

MR. JOHN HOLR, a leading shipping merchant of Liverpool, who is interested largely in the West African trade, has written some views on colonial development there which the government has made public. He suggests the need for the scientific study of the relative merit, from the cultural standpoint, of cotton, cacao india-rubber, etc., under certain conditions, in order that the natives (and white colonists as well) may be able to plant in each case the best crop for which their location is suited. There are places, he thinks, where the palm oil industry affords better results than any of the other crops mentioned, and in such places he would regard it as a mistake to have the natives encouraged to plant them, however desirable their culture elsewhere.

EXTENT OF PLANTING IN MALAYA.

THE extent of rubber planting in the Malay peninsula to the end of 1907 is estimated by Mr. J. B. Carruthers, the director of agriculture for the Federated Malay States, at nearly 150,000 acres, as follows:

Federated Malay States:	
Selangor	63,900
Perak	47,300
Negri Sembilan	15,600
Pahang	900
	127,700
Straits Settlements	16,000
Johore	3,600
Total	147,300

These figures are accepted by the *Ceylon Observer* as fairly accurate, and as equalling the extent of planted rubber in Ceylon.

ALUMINUM LATEX CUPS.

G. VAN DEN KERCKHOVE, the Belgian rubber expert, has brought out a line of latex collecting cups made of aluminum. They are referred to as having these advantages: The metal does not oxidize, and the latex remains clean; besides, the "V. D. K." cups do not bend and are almost unbreakable. Though the price is somewhat higher than some other collecting cups, it is suggested that planters will find them more economical in the end.

PLANTING COMPANY NOTES.

THE Pataling Rubber Estates Syndicate, Limited, of London, with estates in Selangor, issued originally 20,000 of the 30,000 £1 shares of their authorized capital. In January it was decided to issue 2500 additional shares, at a premium of £3 per share, these to be offered first to the existing shareholders and to be paid for by March 31. This issue will provide the company with £10,000 [= \$48,005].

The Damansara (Selangor) Rubber Co., Limited, who are producing rubber in Selangor, announced in January a dividend of 2 per cent. on the paid up capital as of June 30, 1907.

The directors of Cicely Rubber Estates Co., Limited, have declared an *interim* dividend of 15 per cent. on all their shares, for the year ending March 31, 1908, and it is expected that the complete dividend for the year will be 30 per cent., against 10 per cent. last year and 5 per cent. the year before.

Gow, Wilson & Stanton, Limited (London), in their regular circulars relating to rubber producing companies producing rubber in Ceylon and Malaya, report dividends declared by 20 companies.

V. O. Peterson, formerly a professor of chemistry at Rock Island, Illinois, and secretary of the Rock Island Plantation Co., has taken charge of the development of their estate in Oaxaca.

Charles A. Benham, of Cleveland, Ohio, has been chosen by the investors in the Tehuantepec Rubber Culture Co. as official inspector of Plantation "Rubio" for the current year.

BRIEF MENTION.

SIR HENRY McCALLUM, governor of Ceylon, in an address to the planters of that colony, said: "The iron age is past, but we have now the steel age and the rubber age, and I feel certain that the rubber age, which is just now in swaddling clothes, is going to be one of the main things in the world's progress and that we are perfectly right in looking forward to rubber as one of the great industries of the world."

The acreage planted to rubber in Java thus far is reported at 20,000, and the prospects, owing to cheap labor and rich soil, are said to be extremely favorable. The capital and promoters are mainly British, very few Dutch being interested.

The fifth joint annual agri-horticultural show of the Straits Settlements and the Federated Malay States is to be held at Kuala Lumpur, Selangor, in August. It is expected that plantation rubber will figure very prominently among the exhibits. At last year's show fourteen prizes were awarded for displays of rubber.

MERITS OF PLANTATION RUBBER.

LEWIS & PEAT (London) in their rubber review for 1907 say: "It is with satisfaction that at the end of another year we are able to report an increase in the number of manufacturers and consumers who are now using plantation rubber, and who send regular orders for all kinds as they are offered on the market. There is no doubt that this means that by degrees old prejudices are gradually being overcome, and that experience in how best to use the rubber by manufacturers is proving to consumers the superior merits of cultivated over native kinds, and considering the purity and reliable quality of the bulk of supplies sent home for sale, we anticipate manufacturers will further adapt their plant and use plantation more and more. We have had some most satisfactory results of tests for strength brought before us, and if producers will only maintain the reputation

for purity and evenness of quality, we have no fear for the future of the article, although it may be as supplies increase at lower prices."

The firm say that while "block" rubber is in demand, very few planters have succeeded in producing it in even quality or of clear amber color. Wet block has not been favorably received and has been difficult of sale. Crepe is coming to the fore and has made great strides among consumers during the year. Very high prices have been paid for the best quality of worm rubber.

THE LONDON RUBBER EXPOSITION.

ARRANGEMENTS have been further perfected for the International Rubber and Allied Trades' Exhibition, to be held in Royal Agricultural Hall, London, September 21-26, 1908, and referred to last month in THE INDIA RUBBER WORLD (page 162). The advisory committee as now constituted embraces a number of persons in different countries identified with various branches of the rubber interest—planting, chemical, manufacturing, and commercial. The list is too extensive to be given here, but its character is such as to commend the enterprise. The program provides for exhibits of rubber manufactures, under 25 headings; machinery for rubber factories; accessories for rubber planting, and crude and prepared rubber of every description. Further information is available from A. Staines Manders, 75, Chancery Lane, London, W. C., England.

THE GUAYULE RUBBER SITUATION.

AN important rubber manufacturing concern in Austria writes to THE INDIA RUBBER WORLD to ask if it is true that a number of Mexican factories preparing guayule rubber have been closed, and adds: "If so, an advance in the prices of this product might be expected in the near future." It is true that, with the reduced activity of the rubber market for some time past, and the decline in prices of rubber of all grades, the production of guayule became less active. Some of the smaller concerns stopped work entirely and even the larger ones curtailed operations. It is to be presumed, however, that the return of an active market would at once stimulate work in the Mexican factories.

It happens that the *Mexican Herald* of recent date contained a dispatch from Torreón, the chief center of the guayule interest, stating: "The guayule market is showing a marked improvement. The price is better, the demand stronger and the shipments larger than for two months." It may be noted, however, that the Mexican paper presents no statistics or price quotations.

THE ARTIFICIAL RUBBER PROSPECT.

WHILE a great deal has been printed in England and the British colonies during the past year on the subject of "artificial" or "synthetic" rubber, and the possibility of some such material competing with natural rubber, it does not appear that any real progress has been made in the new field. In other words, the rumors referred to have served only to scare some investors in rubber planting companies.

The sentiment of the British crude rubber trade, after a year of such rumor mongering, is well expressed in this paragraph from the review of the trade for 1907 issued by Lewis & Peat, London rubber brokers:

"During the past year artificial rubber has been talked about a great deal, but so far nothing tangible has been forthcoming, and we do not know anyone in the rubber trade of any importance or authority who believes in the likelihood of the production of a substitute for the real article, or has seen a sample of it, and at the lower range of prices for all kinds of rubber and the increasing supplies the danger now from this source is more remote than ever."

Native Sources of Rubber.

RUBBER EXPORTERS ON THE AMAZON.

THERE were 21 exporters of crude rubber last year from Pará and Manáos, not including sundry small shippers who handled all told less than one-half 1 per cent. of the total. The largest shippers for many years past have been the related firms now styled Schrader, Gruner & Co. (Pará) and Dusend-schön, Nommensen & Co. (Manáos), whose combined exports for 1907 amounted to 23,618,850 pounds, or 27½ per cent. of the whole output for the year from the Amazon region. Their transactions covered more than 30 per cent. of the shipments from Manáos and Pará direct. The houses named represent Poel & Arnold, of New York, Boston, and Akron, and Heilbut, Symons & Co., of London and Liverpool.

NEW GRADE OF RUBBER FROM MANAOS.

THERE was offered at the London rubber auction of December 20 a small consignment from Manáos described as plantation sheet Pará which it appears was the result of the first actual attempt of imitating eastern plantation methods with Amazon rubber. The London correspondent of *The Times of Ceylon* hears that the Amazon specimen was considered a good deal stronger and more resilient than the average Eastern plantation sheet, though less clear and bright. The correspondent adds: "The best price offered, 3s. 7d. [=87 cents] per pound, is hardly indicative of the intrinsic value of the rubber, as probably many buyers were only bidding for the lot for experimental purposes and it was withdrawn for a higher limit." Lewis & Peat, London rubber brokers, describe this as an "interesting parcel," prepared from old trees and exceptionally strong; it was sold at a fraction less than Eastern lots.

RUBBER POSSIBILITIES IN BRAZIL.

At a meeting in London of the board of The Brazilian Rubber Trust, Limited, a company engaged in exploiting rubber in Brazil, the chairman, W. P. Lampage, expressed the belief that even if rubber should decline to 1 shilling 6 pence [= 36½ cents] per pound, the Amazon region would continue to produce extensively. The *Ceylon Observer*, remarking that "it is wonderful what new economies can be devised when the urgent necessity for them arises," warns planters in the Far East not to be too confident that declining prices will lead to a decreased Amazon output, leaving the planters with less competition.

SMALL RETURNS FOR FOREST RUBBER CUTTERS.

A RUBBER trader at Bluefields, Nicaragua, writing to *The American*, of that city, in regard to the new rubber monopoly granted by the government, figures out that a merchant who buys and ships 100 pounds of rubber must pay—

To the monopoly <i>cessionnaires</i>	\$10.00
For export duties.....	8.20
Freight, shipping charges, and brokerage.....	4.45
Total	\$22.65

This rubber, he says, will shrink to 93 pounds on the way to New York, where the rubber will bring say 50 cents a pound, or \$46.50, netting the exporter \$25.85. If he paid more than 20 cents a pound at Nicaragua he has nothing left for himself. What then must there be for the rubber gatherer in the forest, whose product goes through two or three hands before reaching the export merchant, assuming that the latter figures so as to assure himself a profit?

AN AMAZING PROSPECTUS.

THE prospectus of The Amazon Trading and Development Co.—to which an editorial article in this issue is devoted—deals with "money making opportunities in the great valley of the Amazon valley" in the most reckless language that has yet been employed in connection with rubber exploitation. The company was incorporated in Maine February 20, 1907, with

\$1,000,000 capital authorized, which limit was raised December 9, 1907, to \$3,000,000. The original officers, with Maine addresses, were "dummies"; the president now is L. E. Ewing, a lawyer, of Cleveland, Ohio, and the treasurer A. B. Lewis, "capitalist and mine owner," No. 1 Wall street, New York. The alleged object is to trade in rubber and other Amazon products, with headquarters on the river Juruá, employing 15 steamers and 25 gasoline launches. "This fleet, it is expected, will be in commission by April 15 of the present year," says the prospectus. It may be remarked, by the way, that the booklet is not dated, so that "the present year" may be construed to suit any reader.

JEQUIE (THE NEW "MANIHOT") RUBBER.

THE *Notizblatt* of the royal botanical gardens at Berlin devotes an extra number (January 25, 1908) of 52 pages, with plates, to a study of "Kautschukgewinnung und Kautschukhandel in Bahia" by Ernest Ule, whose work in the Amazon rubber region has proved of such interest and value. The source of "caucho" or Peruvian rubber, it will be remembered, is now identified as *Castilloa Ulei*, in recognition of his studies bearing upon this species. In Bahia Herr Ule has identified three species of *Manihot*, in addition to the *Manihot Glaziovii*, of which so much has been written, and which is widely identified with the rubber known commercially as "Cará" or "manicoba." Until recently all the manicoba was supposed to be the product of one species, but it now appears that there are several distinct species, of differing values as rubber producers, some being better adapted than others for cultivation.

Bahia of late has outstripped the state of Ceará in rubber production and special attention has been attracted by a quality which takes its name from the town or region of Jequie. [See THE INDIA RUBBER WORLD, October 1, 1907—page 9.] Herr Ule designates the tree producing Jequie rubber as *Manihot dichotoma*.

Not a little interest has been shown in Great Britain of late in rubber exploitation in Bahia. The Bahia Rubber and Fibre Plantations was registered in London January 21, 1908, with £150,000 [= \$720,075] capital, to acquire several plantations already formed and to extend them.

FRENCH WEST AFRICA—PRODUCTION.

THE following statistics of exports of crude rubber (in metric tons) appear in a report by Yves Henry, director of agriculture:

YEARS	Guinea.	Soudan.	Casamance.	Ivory Coast.	TOTAL.
1902.....	1155	324	225	912	2616
1903.....	1468	533	379	1167	3547
1904.....	1382	618	382	1536	3918
1905.....	1415	615	402	1180	3612
1906.....	1580	765	417	1518	4280

MONOPOLY OF RUBBER IN NICARAGUA.

THE organization was mentioned in our last issue of the Atlantic Industrial Co., with a capital of \$300,000 (gold), to control the extraction of rubber in the national forests in Nicaragua. It appears that the new company has succeeded to the rights under the concession granted by the government to Guerrero and Moreira to gather rubber in the department of Yelaya and certain other districts, for 10 years from September 10, 1905. The terms of the contract with the persons named appeared in full in THE INDIA RUBBER WORLD October 1, 1905 (page 14). The government of Nicaragua has now conceded the sole right to gather and export rubber from the public domain in the districts of San Juan del Norte and Siquia to Generals Galle and Ascension Flores, for 10 years from June 1, 1908. It is rumored that these rights will be transferred to the Atlantic Industrial Co., which will then control the entire rubber production in the national forests of the republic.

The New York Fire Hose Situation.

DURING the month a commission appointed by Mayor McClellan has held an investigation into the character of the hose in use by the New York fire department, the result of which has been to confirm the charges made by the New York Board of Fire Underwriters. [See THE INDIA RUBBER WORLD, February 1, 1907—page 141.] One object of the investigation was to fix the responsibility for the existence in the department of much poor hose, but nothing definite seems to have been brought out under this head. It would seem that the fault has been due to a system long in vogue rather than with any particular individual. The head of the department is changed frequently, so that most of the hose now in service was purchased under the administration of officials now no longer in position, and therefore beyond the power of the city authorities to discipline them, even if any criminal negligence could be proved. It was established, however, that Mr. Lantry, the fire commissioner in office at the time of the Parker building fire, in January, had it in his power during the preceding year to buy very much more hose than was ordered, but used his discretion to expend the department appropriation for other purposes than the purchase of hose.

Following the investigation Mr. Lantry's resignation was accepted by the mayor, who has appointed as the head of the department Mr. Hugh Bonner, who was for a long time an official in the fire service, being retired on account of age and alleged physical incapacity. Subsequently, however, he reorganized the fire service of Manila. He is referred to as the first practical fireman who has ever served as fire commissioner of New York. He has begun actively the introduction of new methods, with a view to reforming the department, with the idea that so many new conditions exist, in this era of tall buildings, that many of the old provisions for fighting fires have become obsolete.

Mr. Bonner recommends the appointment of a commission composed of an expert in mechanics, an expert in chemistry, and an expert hydraulic engineer, to purchase all supplies, to be secured as far as possible by competitive bidding. He considers necessary the early expenditure of \$150,000 for new hose and hose repair. The city authorities on January 31 appropriated \$50,000 for immediate use in the purchase of hose, and it is probable that further appropriations will follow soon.

* * *

THE Merchants' Association of New York has shown a lively interest in the question of fire protection, following the recent disclosures regarding the quality of hose used by the city fire department. The association, as a body, has not confined its attention to the matter of hose, but has taken up the broader question of the management of the department. In a letter to the mayor of New York, the president of the Merchants' Association calls attention to the importance of the new high pressure salt water system now nearing completion, "the future use of which involves important modification of fire department equipment and practice, toward providing which, however, little has as yet been done."

A special point in the letter from the Merchants' Association is thus expressed:

"The head of the fire department should be a competent engineer, fitted by education and training for the task of developing to its highest efficiency a thoroughly modern fire department. The changed building conditions have developed engineers specially trained in criticizing construction and suggesting fire defenses, so that there is now a class of professional experts, from whose ranks may be selected a man fully equipped to meet the emergency of the hour. "It is respectfully submitted," says the letter to the mayor, "that you can render no greater service to the city at this juncture than to make such a man commissioner

of the fire department, fully divorced from all political affiliation and with a free hand to accomplish results."

* * *

THE wholesale condemnation of the equipment of the New York fire department which appears in the daily press, says *Fire and Water Engineering*, does not seem to be justifiable. While it is true that a large number of lengths of hose in proportion to those used have burst during conflagrations, this ought not to warrant the statement that all the hose in the department is rotten.

The city that buys cheap fire hose risks the destruction of the whole place by fire. Everything that enters into the manufacture of hose costs more than a few years ago—rubber and other raw material and the labor employed. So manufacturers should not be expected to sell hose at former prices. *Fire and Water Engineering* thinks that hose sold at less than \$1 or \$1.25 per foot ought not to be expected to stand high pressure or be guaranteed by the makers.

The paper referred to insists that in every city the fire commissioner should be an expert in the science of fire fighting, and not a mere political appointee, who depends upon others to inform him what he should or should not do to keep the fire department up to the mark in personnel and equipment.

* * *

In the discussion of fire hose conditions in the newspapers and by the public the expression is constantly heard that the bursting of the hose is due to its being lined with "rotten" rubber, and in some of the articles published an attempt has been made to show how this is so. The idea appears to be overlooked entirely that the rubber lining of fire hose contributes almost nothing to its strength, that element being due to the cotton duck used. The function of the rubber lining is to render the hose more water tight, to protect the interior of the cotton hose from the effect of moisture in inducing mildew and rotting, and to lessen the friction, or resistance offered by the hose inner surface to the flow of water. While the rubber lining is not depended upon for strength, it is desirable that only the best rubber be used for this purpose, for the reason that the cracking or giving way of the rubber from whatever cause permits moisture to reach the interior of the cotton fabric, thus causing it to rot. It is for this reason that an inferior quality of rubber tends to shorten the life of hose, which bursts at an earlier date than is contemplated under the customary guarantees. But such early giving way is by no means conclusive that a poor quality of rubber has been used; oftener than not it is an indication of lack of proper care of the hose—for instance, as in not properly drying the hose after use.

CAMPHOR BECOMING LOWER.

SINCE the camphor industry in Formosa became a government monopoly, August 8, 1899, the monopoly bureau has been able by regulating the supply of the raw product to advance considerably price of camphor to consumers. The price finally became so high as to stimulate the camphor industry of China, resulting in an enforced decline in prices. Moreover, synthetic camphor is coming into competition with the natural product, and prices are expected to remain permanently lower than for a few years following the creation of the monopoly. The contract of the Formosan government with a British firm to act as sole selling agents for camphor will terminate March 31, 1908, after which it is reported that Japanese commissioners will open offices in New York, London, Berlin, and Paris, for the sale of Formosan camphor direct to consumers, in the hope of increasing the government's revenue from this source.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JANUARY 7, 1908.

- N**O. 875,726. Vehicle wheel and tire therefor. V. H. McDowell, Lynn, Mass.
 875,994. Tire. W. D. Harris, Philadelphia, assignor to Harris Tire and Rubber Co.
 876,002. Water bottle stopper. H. P. Kraft, New York city, and M. C. Schweinert, West Hoboken, N. J.
 876,001. Rubber holder. F. C. Reed, Paonia, Colo.
 876,101. Water bottle stopper. M. C. Schweinert, West Hoboken, N. J., and H. P. Kraft, New York city, assignors, by mesne assignments, to A. Schrader's Sons, Inc.
 876,101. Vehicle wheel tire. J. Jackson, Gregory, Mich.
 876,301. Washer for fire hose. S. Cunningham, Lockport, N. Y.

Trade Marks.

- 30,783. Mary J. Doherty, executrix of Eugene Doherty, New York city. The words *Samson Rubber*, over a representation of Samson and the lion. For dental rubber.
 31,274. Hood Rubber Co., Boston. The words *Red Rock*. For rubber footwear and rubber tires.

ISSUED JANUARY 14, 1908.

- 876,361. Process of making socket members for hot water bottles of the like. H. P. Kraft, New York city, and M. C. Schweinert, West Hoboken, N. J.
 876,431. Process of vulcanization. A. O. Bourn, Bristol, R. I.
 876,453. Spray nozzle. W. H. Heard, London, Ontario.
 876,507. Vehicle tire. F. A. Seiberling, Akron, Ohio.
 876,616. Cushion tire. C. Zegen, Chicago.
 876,645. Spring cushioned tire. I. Hodgson, assignor to The Automatic Wheel and Rim Co., all of Minneapolis, Minn.
 876,702. Hose band clamp. J. B. Driscoll, Louisville, Ky.
 876,775. Veterinary dilator and impregiator. L. O. Crittenden, Cleveland, Ohio.
 876,826. Wheel tire. T. J. McCarthy, Los Angeles, Cal.

Design Patents.

- 39,010. A. A. Spadone, assignor to The Gutta-Percha and Rubber Mfg. Co., New York city. Ornamental design for tiling.
 39,025. Eberhard Faber, New York city. Design for an eraser.
 39,027. W. O. Keneman, Milwaukee, Wis. Design for a rubber heel.

Trade Marks.

- 30,077. Sanders Duck and Rubber Co., St. Louis. The words *Bull Frog*, over the representation of a frog. For rubber footwear.
 30,012. Strong Machinery and Supply Co., New York city. The word *Kingfisher*, over a representation of a kingfisher. For hydraulic presses.
 31,151. Hood Rubber Co., Boston. The word *Spearhead*. For rubber footwear and rubber tires.

ISSUED JANUARY 21, 1908.

- 877,217. Wheel rim fastener. R. L. Morgan, Worcester, Mass.
 877,260. Pneumatic tire. T. B. Tiefenbacher, New York.
 877,396. Water bottle. R. S. Blair, New Rochelle, N. Y.
 877,450. Cushion heel. R. W. Perry, Stonham, assignor of one-half to G. H. Stevens, Melrose, Mass.

Trade Marks.

- 20,671. The May Co., Cleveland, Ohio. The words *No. 77*. For rubber tires.
 31,372. Cern Products Refining Co., New York city. The word *Paragol*. For rubber substitutes.

ISSUED JANUARY 28, 1908.

- 877,512. Antislipping device for tires. W. T. Maxwell, assignor of one-half to W. G. Eberhardt, both of Pittsburgh.
 877,620. Pneumatic wheel and hub. H. A. Brown, Lehigh, Iowa.
 877,769. Protector against skidding. C. Henke, Witten, Germany.
 877,801. Portable tire inflator. J. W. Radu, assignor of one-half to P. C. Wild, both of Rochester, N. Y.

Trade Marks.

- 30,308. George Borgfeldt & Co., New York city. The word *Wingfield*. For tennis balls.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Inventions.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, DECEMBER 31, 1907.]
 20,093 (1906). Detachable rim for tires. H. L. M. Pixell and C. J. Honeywood, London.

- 20,161 (1906). Puncture repair device for tires. G. Gordon and W. Berry, Blackpool.

- 20,180 (1906). Process of vulcanizing metal studs in tire covers. T. Sloper, Devizes, Wiltshire.

- *20,372 (1906). Manufacture of seamless footholds or overshoes. S. Schwarzhild, Rochester, New York.

- *20,373 (1906). Construction of a light overshoe. *Same*.

- *20,404 (1906). Substitute for rubber. [Chromates are added to the gelatinous material, with coloring matter for the purpose of retarding the action of the life to prevent the premature hardening of the mass. Referred to in THE INDIA RUBBER WORLD, April 1, 1907—page 218—as "Zackungummi".] Zacharias Olsson, Upsala, Sweden.

- 20,428 (1906). Puncture preventing band for tires. B. Oglaiby, Fletcher-town, Cumberland.

- 20,436 (1906). Tire rim with detachable flanges. W. E. and J. B. Rowcliffe, Manchester.

- 20,444 (1906). Tire rim with one detachable flange. P. W. Turquand, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 15, 1908.]

- 20,524 (1906). Puncture proof tread for tires. [A series of overlapping metal plates inserted in transverse slots in a rubber band after vulcanization.] J. M. Lamb, Wood Green, Middlesex.

- *20,841 (1906). Tire composed of alternate sections of elastic and non-elastic material. Eleazar Kempshall, London.

- *20,842 (1906). The preceding tire, with sections threaded on an inflatable tube, and the whole enclosed in a cover. *Same*.

- *20,843 (1906). Tire built up of alternate layers of rubber, rubber and canvas, and gutta-percha. *Same*.

- 20,852 (1906). Protective cover for tires. A. Beldam, Baldoek.

- 20,857 (1906). Revolving heel pad. P. M. Orr, Sheffield.

- *20,919 (1906). Golf club [having a cover plate of rubber, between which and the face of the club are a number of balls made by winding rubber bands over hair or fiber]. C. W. Royce, Montclair, New Jersey.

- 20,957 (1906). Pneumatic tire [having sectional air tubes arranged end to end around the wheel, each having a separate valve]. J. and G. E. Turner, Manchester.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 15, 1908.]

- 21,410 (1906). Device for locating tire punctures. J. Benneckenstein, Berlin.

- 21,427 (1906). Mold for forming tire fabrics. P. M. C. Nibet, La Grave par Luxe (Charente), France.

- 21,427A (1906). Construction of a tire fabric from rubber cord. *Same*.

- 21,441 (1906). Elastic tire. A. Blodner, Gotha, Germany.

- *21,447 (1906). Vulcanizer for tire repairing. C. A. Shaler, Waupun, Wisconsin. [Illustrated in THE INDIA RUBBER WORLD, December 1, 1907—page 73.]

- 21,466 (1906). Solid rubber tire in rectangular sections. W. H. Paull, Birmingham.

- 21,497 (1906). Pneumatic tire with segmental air tubes inflated with a single valve and a series of supply pipes. J. Lowe, Bolton.

- 21,493 (1906). Substitute for rubber [formed by the manufacture of celluloid by using fully-substituted ureas instead of the whole or a part of the camphor]. C. Claessen, Berlin.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 22, 1908.]

- 21,710 (1906). Conveyor belting with special fabric for insertion. F. Redaway, Manchester.

- 21,711 (1906). Printers' washing blankets for use in calico printing. *Same*.

- 21,717 (1906). Tire with outer cover and core of solid rubber. W. McGee, Paisley.

- 21,757 (1906). Hoof pad with raised heel part. H. H. Lake, London. (A. C. Tappe, Cincinnati, Ohio, and R. T. Badgley, New York city.)

- 21,800 (1906). Stamp for printing with rubber type, lined with sponge rubber strips to hold the type elastically. A. C. Thomson, Glasgow.

- 21,812 (1906). Apparatus for cleaning, wringing, and folding fire engine hose. M. Fais, Munich, Germany.

- 21,861 (1906). Rubber composition for nonslipping boot soles, formed by dissolving Para rubber in benzine, adding pulverized cork, kneading, and adding successively chalk, bath brick, and emery powder. A. H. J. P. Hulot, Paris, France.

- 21,943 (1906). Mold for tire tread. W. Clark, London. (Louis Peter, Frankfurt a. M., Germany.)

- 21,986 (1906). Protective non skid cover of chains for tires. W. Guthrie, Edinburgh.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JANUARY 29, 1908.]

- 22,045 (1906). Spring wheel. [A rigid tread rim is supported on a pneumatic tube and connected to the rim by flexible side members.] E. C. Kingsford, London.

- 22,046 (1906). Pneumatic tire tread band of fabric cut on the bias. T. Warwick, London.

- 22,054 (1906). Heel protector. W. Roberts, West Bromwich.

- 22,058 (1906). Spring wheel. [An inner pneumatic tire wheel enclosed in an outer wheel or casing.] A. and S. Waddington and W. Firth, Dewsbury.

- 22,150 (1906). Attachment of pneumatic tires to rims. H. W. Booth and W. Marshall, London.

- 22,173 (1906). Detachable flange for a tire rim, with inflatable tube between the flange and felloe to form a watertight joint. S. V. Galley, London.

- 22,245 (1906). Solid tire formed with radial holes to receive metal plugs resting upon rubber bases. C. H. Wilkinson, Huddersfield.

- 22,262 (1906). Elastic tire. R. and S. Basch, London.
 22,286 (1906). Pneumatic tire with segmental tubes. J. T. Boyes, London.
 22,410 (1906). Method of manufacture of rubber hose to prevent over-curing. W. H. Adam, Montreal, Quebec.
 22,456 (1906). Automatic inflation of motor car tires while in motion. C. R. Whitfield and W. R. Harrison, Middleborough.

THE FRENCH REPUBLIC.

Patents Issued (With Dates of Application).

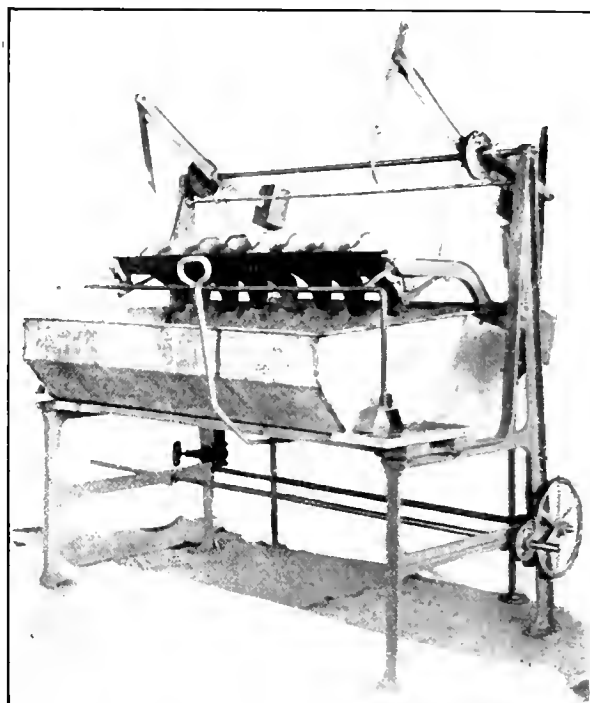
- 378,801 (May 21, 1907). Rouzeville. Process of reclaiming rubber.
 378,865 (June 14). A. C. Devarennès. Elastic wheel.
 378,965 (June 18). G. Col. Process for the purification of resinous products.
 379,106 (June 21). Société anonyme La Maroquinerie Nationale. Pneumatic tire.
 379,118 (June 21). The Middleton Pneumatic Hub Co. Pneumatic wheel.
 379,153 (June 22). Michelin & Co. Apparatus for lessening the temperature attained by pneumatic tires of wheels.
 379,161 (June 22). F. Walton. Tire.
 379,180 (June 22). Société Ecovite, Limited. Insulating compound and the process for its manufacture.
 379,468 (July 2). K. Schultze. Process of tire manufacture.
 379,341 (June 8). G. de la Nezière. System of vulcanization.
 379,523 (July 8). H. Hensch. Pneumatic tire protector.
 379,526 (July 4). J. Ohm. Manufacture of artificial rubber.
 379,534 (July 4). P. J. Bizard. Process for the extraction of rubber from certain plants.
 379,493 (July 3). J. Schott-Getenon. Pneumatic boot heel.
 379,575 (May 27). R. E. Jeffery. Removable tire rim.
 379,646 (July 4). W. H. Cox. Press for tire manufacture.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

A SUCCESSFUL SHOE VARNISHER.

AN ingenious resident of Bristol, Rhode Island, Mr. J. H. Wall, has evolved and patented a very simple and practical machine for varnishing rubber shoes, three illustrations of which are shown herewith. The machine, which is protected in the United States and abroad, has already been adopted on a royalty basis by many large manufacturers—notably the North British Rubber Co., of Edinburgh, Scotland; the Beacon Falls Rubber Shoe Co., the Apsley Rubber Co., the Hood Rubber Co., and several of the Canadian shoe concerns.

The maximum capacity of the varnisher is 1200 pairs in an hour, with two men to feed it. As a rule, however, it is operated by one man, the product being 500 pairs an hour. In one



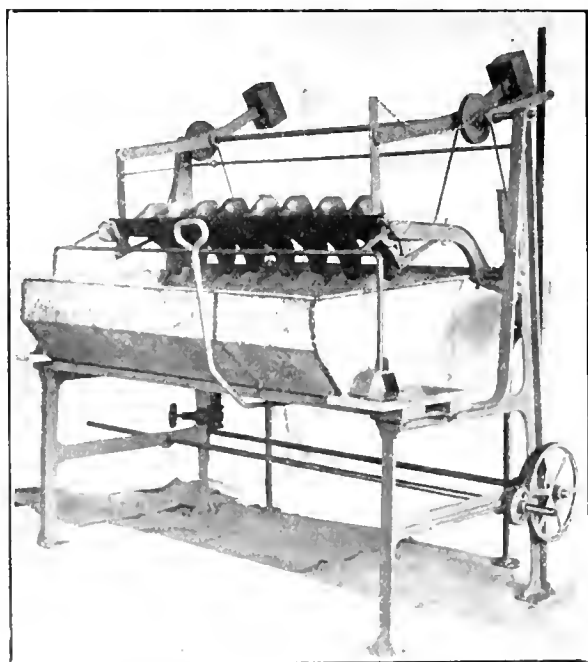
WALL'S SHOE VARNISHING MACHINE.

[Machine just hooking on to lower row.]

of the factories where it has been installed a force of 52 men was cut down to 18.

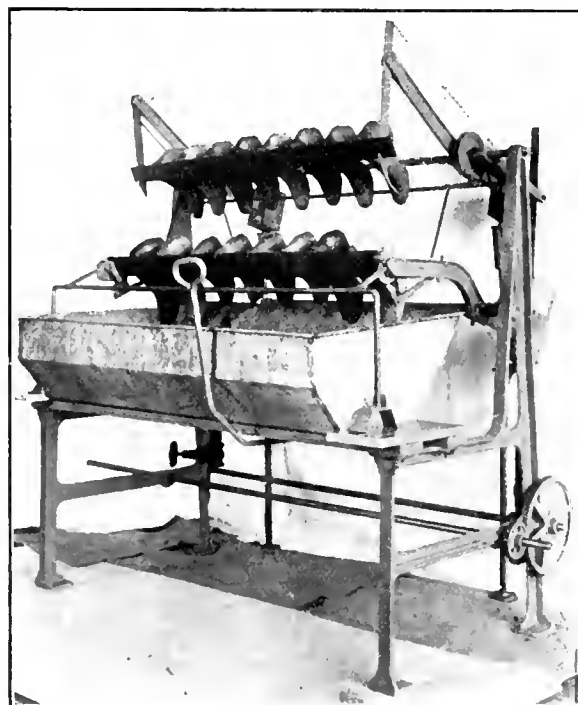
As may be seen from the illustrations, a stick of shoes is placed in the machines, a lever pulled, and the shoes descend into the varnish, return, and are automatically caught up into the upper rack, where they drain while the machine tender places another stick in position for dipping.

Mr. Wall's United States patents are No. 817,408, April 10, 1906; No. 841,361, January 15, 1907; and No. 862,526, August 6, 1907.



WALL'S SHOE VARNISHING MACHINE.

[Ready to hook on.].



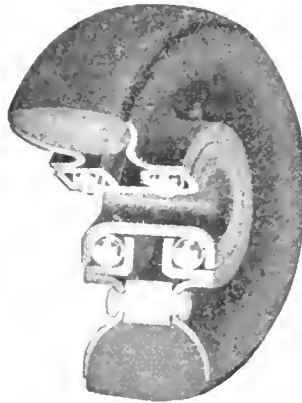
WALL'S SHOE VARNISHING MACHINE.

[In position for dipping.]

New Rubber Goods in the Market.

RUBBER TIRED SKATE ROLL.

A new rubber tired all-steel patented skate roll shown in the accompanying illustration, the bodies of the wheels are of pressed steel and designed to give great strength. The bearings are of the usual cup and cone ball type. The cones, which are in two sections, are of the required length, so that when placed in position the exact adjustment of the balls is obtained and always maintained. The shaft thimble extends entirely through the bearing, and after being placed in position is pressed out at the edges, forming a perfect lock, which holds the bearings and the roll together and precludes the loss of any parts or balls. No adjustment is required in fitting the rolls. They will fit any skate, the shaft thimble being of standard size. They run smoothly and noiselessly, and each is complete in itself. [Pressed Steel Manufacturing Co., No. 454 Bourse street, Philadelphia.]



RUBBER TIRED SKATE ROLL.

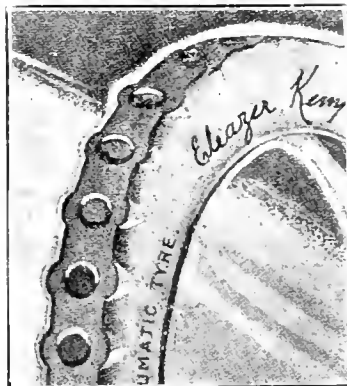
BAILEY'S WON'T SLIP CRUTCH TIP.

The distinctive feature of Bailey's "Won't Slip" tire tread, now used and warmly commended wherever automobile tires are used, is now being applied with success by its ingenious inventor to various other uses. One is represented in the illustration herewith. This tip is warranted not to slip on any surface, or on smooth ice, or to mar the most highly polished floor. The teeth form a cushion which is easy and noiseless to the bottom of a crutch or chair. [Charles J. Bailey & Co., No. 22 Boylston street, Boston.]



KEMPSHALL'S NON SLIP TIRE TREAD.

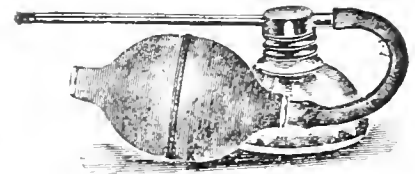
ELEAZAR KEMPSHALL, he of the thousand-and-one golf ball patents and some score of others beside, is out with a rubber non skid which no less a house than Charles Macintosh & Co., Limited, of Manchester, England, are pushing and which from English reports seems destined to be most successful. Indeed, the "tire sharps" in England say that the metal studded tire and the chain have got to give place to the Kempshall type of non skid and this after experiments with big limousine cars over roads purposely greased where it would seem impossible to avoid skidding. To quote: "The car never deflected an inch from the line taken by the driver." The illustration accompanying this shows the tread surface of the new non skid.



KEMPSHALL'S NON SLIP TIRE.

THE PRACTICAL OIL AND WATER ATOMIZER.

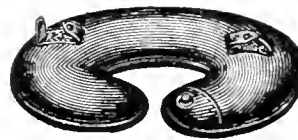
HEREWITH is shown a recently patented oil and water atomizer, for use in the treatment of troubles in the throat or nose—a class of troubles often difficult to deal with and requiring the best of appliances. This new atomizer is designed for spraying all kinds of oils and aqueous solutions. It has an extra large bulb, and is heavily nickel plated. It is referred to especially as being constructed with a view to durability, while its simplicity renders it not liable to get out of order. [Eliis & G. Ihermann, No. 88 Leonard street, New York.]



THE "PRACTICAL" ATOMIZER.

PNEUMATIC CANOE CARRIER.

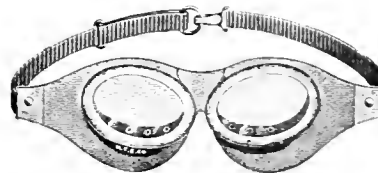
FROM its appearance this would appear to be a most useful contrivance. It can be rolled into a bundle 3 x 6 inches; when inflated used as a pillow, a boat or canoe seat, or a seat around camp. When used as a carrier for canoe the paddles are laid on the thwarts lengthwise of canoe somewhat separated over the center thwart, the straps of carrier are fastened around paddles. The canoe is then lifted, turned over and the carrier set over the shoulders and around the neck, the weight is thus evenly distributed and when balanced one can carry a canoe with ease, using this device. The weight of the article is 2 pounds and the price \$3.50, net. [Abercrombie & Fitch Co., No. 57 Reade street, New York.]



PNEUMATIC CUSHION CARRIER.

A RUBBER GOGGLE.

THE motor goggle shown herewith is made entirely of rubber with the exception, of course, of the glasses. It will adjust itself perfectly to fit any face, and are both dustproof and rainproof. The glasses may be removed or replaced in an instant. The price is \$2. [The Motor Car Equipment Co., No. 55 Warren street, New York.]



A RUBBER GOGGLE.

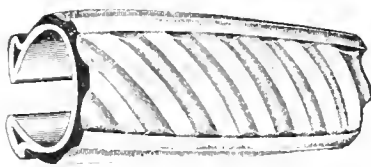
"BETSY BROWN" SAFETY NURSER.

WHILE there may be no rubber in the article shown in the annexed illustration, it is of a very practical character when used in connection with a line of rubber goods for which a very large part of the population of the country at one time experiences a crying need. As will be seen, the distinctive feature of this nursing bottle is a screw collar, made of aluminum, designed to hold the nipple to the bottle securely. Since, with this attachment, the child cannot pull the nipple off the bottle, the danger is removed of the child choking on the nipple or drenching itself with milk. It can be used with any pull over nipple. [John M. Maris & Co., No. 219 Fulton street, New York, control the sale of this article.]

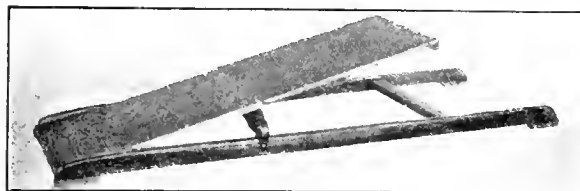


DRYDEN'S NEW NON SKID TREAD.

The illustration herewith gives an adequate idea of the pattern of a new automobile tire tread for which a patent has been applied for. These treads are referred to as not skidding or slipping on wet or slippery surfaces, and as being made of materials of a character to give them great durability. They may be applied to either to new or old tire covers. [Dryden Rubber Tire Co., No. 447 Wabash avenue, Chicago.]

**SPRING BOARD WITH RUBBER MAT.**

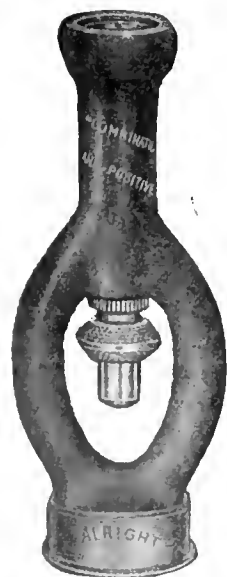
An article illustrated herewith in the line of gymnastic apparatus requires but little written description. While it might be supposed that one spring board is very much like another, the manufacturers of that here shown point to the large sale of their

**SPRING BOARD WITH RUBBER MAT.**

products as an indication of some particular details of construction which give them special merit. This board weighs 75 pounds. The base is of hickory and the top board of narrow second growth ash strips. The reason for giving space to the board here is that it is provided with a rubber mat. [Fred Medart, No. 3535 De Kalb street, St. Louis.]

"ALRIGHT" PROTECTION TIP NOZZLE.

The object of the hose nozzle shown in this illustration is to enable the operator to accomplish better results in washing vehicles and at the same time avoid the great waste of water that is customary with the use of the open hose. In order to prevent damage to the highly polished surfaces of automobile and carriage bodies, due to careless handling of the hose or nozzle, the end of this nozzle is fitted with a rubber protector tip which fully encircles the outlet end. The water can be regulated so as to emerge in the form of a contracted spray, or it can be subdued or forced as the operator desires. When used in spray form, it is in the correct form for perfect washing with the sponge. To instantly change the flow of the water from a spray to a sharp stream it is only necessary to slide the thumb and finger fixture away from the corrugated nut; different distances producing different streams, until the full capacity is obtained. This feature is of particular value when it is necessary to remove lumps of mud, in which instance a sharp stream can be instantly had. [Marion Warren Rochester, New York.]



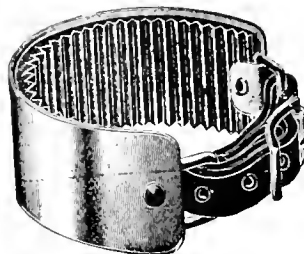
WARREN'S "ALRIGHT" PROTECTION TIP NOZZLE. While by no means complicated, this milk warmer serves other purposes than that which the name implies, and because of this has a place in many of the homes electrically equipped. The line of substitutes that equal anything that any of the French

THE BABY MILK WARMER.

of heating of course passing through the cord. The bottle is placed inside the coil and is supplied with a graduated measuring scale and a rubber nipple. This bottle is of the same shape and size as those in which various prepared foods are sold, so that in case the proper bottle is broken or misplaced the bottles of food may be heated with the same results. The coil heats rapidly and this heat is distributed around the outside of the glass jar. By heating the coil and putting it in a bowl of water the child's bath may be prepared, and after accepting the convenience of this numberless applications may be made whereby it may be put to practical tests. In connection with the heater is a receptacle in which a lamp may be placed and lighted at the same time that the milk warmer is used. [Edison Electric Illuminating Co., No. 360 Pearl street, Brooklyn, New York.]

THE VICTOR TAIL TIE.

An exceedingly neat and otherwise desirable tail tie is that of which an illustration is presented here. It has a wide rubber

**VICTOR TAIL TIE.**

lining and a nickel plated band 1 3/8 inches in width. One of the advantages of this tie is that it has a positive fastening, the return strap making a double hitch. It is claimed for it that it cannot slip off. The price is \$1.50 per dozen. [Edward Felsberg, Montgomery, Pennsylvania.]

THE "CLEANSIT" ERASER.

"CLEANSIT" is an eraser that will clean almost anything from a fine photograph to a pair of white gloves, and it is a very effective remover of pencil marks. It is evidently made of a very high grade of substitute—not that it looks like it particularly, but it comes from the factory of Mr. Robert E. Tyson, Bridgeport, Connecticut, who puts out a line of substitutes that equal anything that any of the French manufacturers have ever produced.

NATHAN WATERPROOF LEGGING.

ONE of the latest things in waterproof leggings is shown in this picture. The view shown is that of the legging before the

**NATHAN WATER-PROOF LEGGING.**

rubbers are put on, the strap being under the shoe. After the rubber is put on the raised portion of the legging is turned down and it fits snugly around the rubber, concealing the strap from view. The price is referred to as not being higher than that of other and less desirable goods. [Nathan Novelty Manufacturing Co., 88 Reade street, New York.]

THE amount of rubber collected in the *domaine privé* of the Congo Free State, by the natives, under the head of taxes "payable in kind, is officially stated 1,250,000 kilograms in 1905 and 1,172,000 kilograms in 1906, the value for the latter year being given as 13,630,000 francs [= \$2,630,500]. This does not represent the whole rubber production in the Congo which contributes to the funds of the Free State and of its king-sovereign. The greater part of the other rubber collected in the Congo is shipped for the account of big trading companies in which "the State" holds, as a rule, one-half of the share capital.

THE directors of the Galvez Rubber Estates, Limited, an English company exploiting native rubber in Bolivia [see THE INDIA RUBBER WORLD, August 1, 1907—page 335], report the collection of 50,000 pounds of rubber up to the end of September last

The Late Amedee Spadone.

THE passing away of Amédée Spadone removes from the rubber trade one of its most prominent members and one who had been a leader in it for an unusual length of time. Although in his eighty-first year, Mr. Spadone was still in regular attendance at the office of his company until well along in the past month, when he was attacked by pneumonia, to which he succumbed on February 22, at his residence, No. 270 West End avenue, New York.

The subject of this sketch was born August 29, 1827, in the north of France, in a village near Arras, in the province of Pas-de-Calais, though of Italian parentage, and came with his family to America in early boyhood. His father purchased a home in Camden, New Jersey, in which he spent his remaining years.

Amédée Spadone began business for himself in 1854 in New York as an importer of watches, with a store at No. 177 Broadway, removing successively to No. 4 Maiden lane and No. 658 Broadway. His name remained on the list of New York jewelers, either alone or with a partner, until about 1879, although he had, before that date, become identified with the manufacture of rubber goods.

Having already laid the beginnings of a successful business career, Mr. Spadone, in 1862, joined in applying for a charter, under the laws of New York state, for a new company, the Gutta Percha and Rubber Manufacturing Co. There had been organized, in 1855, the North American Gutta Percha Co., based upon the patents of William Rider and John Murphy for the manufacture of gutta-percha goods, which did not prove wholly successful, and the works were purchased by the interests which later organized the present Gutta Percha and Rubber Manufacturing Co., but this is the only sense in which Mr. Spadone's company succeeded the first named concern.

Mr. Spadone was elected to a seat in the original board of the new company, organized in 1863, and remained a director until his death. In 1872 he was elected president of the board, with a salary, on the stipulation that he should devote two hours daily to the affairs of the company. In 1878 he decided to devote his whole time to the company, from which date he was the active, forceful and successful head of its management. The company under his leadership had a record of continuous and substantial growth. The original capital of \$200,000 was increased, by successive steps, to the present figure of \$1,000,000, which was reached in 1898. The operations of the company increased on a commensurate scale, particularly in the mechanical goods line, besides which it has enjoyed a most desirable reputation in the trade.

Another original director was H. D. Warren, who long remained connected with the company, and it was during this joint interest that, in 1887, the organization of the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, occurred. This has become a most important and successful business, but in time the connection between the two companies narrowed, and Mr. Spadone became the principal owner of the New York company.

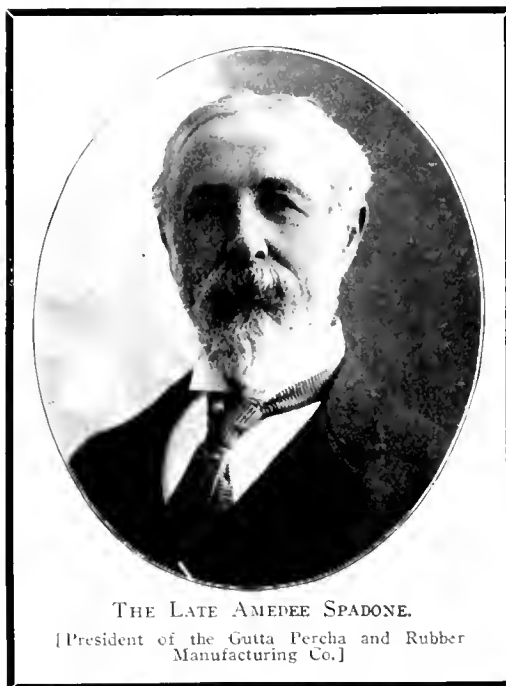
The original factory of Mr. Spadone's company, in West Twenty-fifth street, New York, was burned on October 8, 1874, and a new factory was built and in operation by the following April at Franklin and Skillman streets, Brooklyn, the present manufacturing location of the company. The Mr. Murphy who has been alluded to joined the staff of the Gutta Percha and Rubber Manufacturing Co. at an early period of its history as factory superintendent, retaining the position until within a few years. He is still living, in his eighty-fourth year. Long terms of employment by the company, by the way, have by no means been rare.

Amédée Spadone and Elizabeth Ann Angel were married in the Baptist Church at Camden December 3, 1850. Mr. Angel, the bride's father, had built a row of houses, in one of which he lived himself, and the second house from this had been sold to Mr. Spadone's father, upon the arrival of the latter from

Europe. It was under such conditions of neighborliness that an opportunity existed for a beginning of the attachment between the two young people which resulted so fortunately and so happily. Mr. and Mrs. Spadone celebrated their golden wedding in 1900, and the latter survives her husband, with two sons—Henry and Alfred—and a daughter.

Funeral services were held on Monday, February 24, at 11 o'clock, at Christ Church (Episcopal), in West Seventy-first street, New York. The interment was private.

No man in the rubber trade took a more enthusiastic interest in the trend of the business than did Mr. Spadone. His memory was remarkable, and keeping in close touch as he did with every important movement, and, bringing to bear upon it the analysis of an unusually keen and well balanced mind, his opinion and his advice were always sought by the leaders and were uniformly sound. A typical New York business man, always alert, with no time for nonsense, he was wonderfully kind hearted, and possessed of the rare virtue of frankly admitting an error in judgment and of giving others credit for like honesty of purpose. He was conspicuously of the "old school," suave, courteous, and absolutely free from obstination or vanity. He never sought prominence, in fact he avoided it; yet on the many occasions on which he presided at public functions he was ever at his ease, speaking forcibly and often wittily, and holding the attention of his listeners as few business men are able to do. As illustrating the position he held in the trade, it may be mentioned that he was chosen to head the associations organized from time to time for mutual benefit in the branch of the trade to which he belonged. With his passing a most interesting, helpful member of the trade becomes an honored memory.



THE LATE AMEDEE SPADONE.
[President of the Gutta Percha and Rubber
Manufacturing Co.]

JUDGE LAUGHLIN, of the appellate division of the supreme court of New York, rendered an important decision the other day when he decided that a merchant need not return or pay for goods bought by one of his employés, the employé, who was a purchasing agent, having received a 5 per cent. commission for placing the order. The case came under the anti tipping law.

THE OBITUARY RECORD.

CHARLES W. LINTHICUM.

CHARLES WISLEY LINTHICUM, president of the Linthicum Rubber Co., of Baltimore, died in that city on February 1, after an illness of several weeks, in his fifty-fourth year. The immediate cause of his taking off was Bright's disease. Mr. Linthicum was a native of Anne Arundel county, Maryland,

where several members of his family were persons of distinction. Mr. Linthicum had been for a number of years interested in the rubber boot and shoe business. For a while he had the Baltimore agency for the United States Rubber Co., which developed into the Linthicum Rubber Co., with Mr. Linthicum as president, a position which he filled to the time of his death. He took an active interest in the business life of



CHARLES W. LINTHICUM.

Baltimore apart from his own house, as is indicated by his membership in the Credit Men's Association and in the Shoe and Leather Board of Trade of Baltimore. Of the latter he was vice president. The funeral occurred on February 3. Surviving Mr. Linthicum are a widow, three sons—Charles M., George S., and Garland Linthicum—and a married daughter. Charles W. Linthicum was a man of many pleasing qualities, who will be mourned by a host of friends.

WILLIAM H. FULLER.

WILLIAM H. FULLER, whose death from pulmonary troubles occurred on February 13 in the Presbyterian Hospital, New York, was a man of most interesting personality. He had been connected with the auditing department of the United States Rubber Co. for ten years, but this was only the closing chapter of a long and varied life. Born in England over 70 years ago, he studied at Oxford and, after completing his education, went to India, where he became connected with large commercial enterprises. But he early developed a taste for literature and made many acquaintances in the literary and official circles of that country. Among his personal acquaintances at that time was Rudyard Kipling.

After many years in India Mr. Fuller moved to Canada, and while engaged there in banking found time to do a good deal of literary work. "The Canadian Men and Women of the Time," a book published in 1898, describes him as an essayist and playwright, and speaks of "a local burlesque from Mr. Fuller's pen, which had a remarkable successful run during two seasons." Mr. Fuller became a resident of New York about ten years ago, and while connected with the auditing department of the United States Rubber Co. devoted his spare moments to literary work, particularly in the line of short dramatic productions. Three years ago he took one of the prizes offered by *Munsey's Magazine* for the best "topical" verses.

Mr. Fuller was a man of fine literary appreciation and of extensive reading. He was a Shakespeare scholar of no mean order. While a man of retiring disposition his long and varied

experience and his knowledge of literature made him a most interesting personality and an entertaining companion, and he numbered among his friends many of the most prominent literary and artistic people of the day.

CHARLES H. NEIDNER.

CHARLES H. NEIDNER, of Malden, Massachusetts, died at his home on January 31, in his seventy-first year. Born in the kingdom of Saxony, he came to America in 1863 and became interested in weaving. Ten years later he settled in Malden and became employed in the linen fire hose industry. In 1893 Mr. Neidner began the manufacture of linen fire hose on his own account, and became very successful. Gradually other lines of production were added, including cotton fabrics for insulation. Less than a year ago the business was turned over to a corporation styled Chas. Neidner's Sons Co., the business of which has been controlled by the sons of Mr. Neidner, who had previously been engaged in business with their father. Mr. Neidner had been an invalid since December, as result of an accident. He is survived by a widow, three sons, and two daughters. Mr. Neidner was a member of the Boston and Malden Turn Verein, which body was represented at the funeral on February 3. One of the sons is chairman of the Malden board of aldermen.

A VISITOR FROM ITALY.

DR. ALBERTO PIRELLI, of the great rubber manufacturing concern, Pirelli & Co., of Milan, Italy, is at present in the United States, and will be here for some weeks. One of his pleasant duties was to watch the start of the Zusta car in the New York to Paris automobile race which began at Times square on Wednesday, February 12, that car being equipped with Pirelli tires.

Speaking of the company of which he is one of the officers, Dr. Pirelli reports a great increase in their business, so much so that they are soon to establish a third factory at Greco, some 3 miles out of Milan, which will be devoted to the manufacture of reclaimed rubber for their own use, and also heavy cables. A very large area of land has been plotted for the factory buildings and for the homes of the laborers, of whom there will be 500 at the beginning. The power will be electrically transmitted by cables from waterfalls a few miles distant.

Dr. Pirelli, on coming into the United States, brought with him a young man who has done brilliant work in the great factories at Milan, and whom he planned to introduce to various leaders in the rubber trade here. Unfortunately, however, the day before the start of the New York-Paris automobile race, the visitor in examining a wheel of the Zusta car, the rear end of the car being jacked up, was unlucky enough to have his foot under the wheel rim when the jack slipped out and the car dropped. Some of the bones in the foot were broken and his vacation visit to America has been largely spent in the hospital.

HOW TO TEST OXIDE OF ZINC.

A VERY simple test for zinc oxide is as follows: Put a small quantity in a test tube or vial and add diluted muriatic acid (such as can be obtained in any drug store); agitate to dissolve all lumps, and if it is commercially pure oxide of zinc, no residue will remain. The only adulterant likely to be found which would not leave a sediment would effervesce violently.

Should the addition of acid to the pigment produce sulphureted hydrogen, the odor of which is unmistakable, no doubt would exist that the sample is not oxide of zinc and probably a much cheaper pigment. There are many pigments on the market called zinc and containing some zinc in various forms, which have their uses, but should not be confused with straight oxide of zinc.

AUTOMOBILES AND TIRES.

HERE are some figures that may be of interest to those persons who try to figure out the number of rubber tires made and used. The records kept by the association of licensed automobile manufacturers show that 47,302 pleasure vehicles of the gasoline type were made in the United States during 1907. The aggregated value is \$60,100,572. It is estimated that during the same year 5,000 steam and electric pleasure vehicles were built and sold, of the value of \$7,500,000, making a total value of \$105,600,572. The value of such products in 1904 was \$20,645,064, since which the increase of production has increased at a practically steady rate.

STEPNEY SPARE WHEEL IN AMERICA.

At the statutory meeting of the Spare Motor Wheel of America, Limited (London, January 21), the chairman, Robert Lee Wood, reported the details of a recent visit to the United States, and particularly to the works of the American company, at St. Anne, Illinois. [See THE INDIA RUBBER WORLD, December 1, 1907—page 88.] He congratulated the members of the parent company, in England, upon the prospects of the trade in America, through the Illinois company. He thought that the demand for the spare wheels would be very large on this side, owing to the great stretches of bad roads which motorists find themselves compelled to deal with. The branch company was registered on October 14 last, and the chairman, at the London meeting, asserted that orders had been booked for 23,600 wheels, all to be delivered before September. At the St. Anne works the wheels are made from start to finish, whereas in England the company has the rims made and simply fits them up. The Spare Motor Wheel of America, Limited, have opened offices at No. 2148 Broadway, New York.

WHY TIRE INNER TUBES "PINCH."

It is not an infrequent occurrence at a rubber tire factory to have returned inner tubes which have only been used a short time and come back with a longitudinal tearing. The cause of that tearing is easy to recognize. The air tube has been pinched by a careless person during the operation of mounting the tire. The "pinch" is an accident, generally occasioned when the automobilist is trying to place the second cushion inside the rim. The air chamber gets pinched to a more or less considerable length, and determines a corresponding cut, which it is almost always impossible to repair on the road. Then the tube is forwarded to the factory, where a "muff," of a length equal to the wounded part, is fitted. While the pinch is considered as an onerous accident, there is nothing easier than to avoid it.

There are three sorts of pinches. The first is formed between the shoe cushion and the bottom of the rim. It occurs generally when the operator puts into place the last part of the cushion, and the tube is not sufficiently inflated. The second sort of pinch is formed by the introduction of a part of the air chamber under the head of one—or several—of the safety bolts. The third, which is less frequent, consists of a fold formed by the air chamber near the valve, and maintained in this position by the valve itself.

MOTOR CARS POPULAR IN CHINA.

CHINA may yet afford a great market for rubber tires, judging from the reports from many sources of the growing popularity of the automobile among the Orientals. The commissioner of customs at Shanghai thinks it worth while to write in an official report: "No modern invention has developed more rapidly in Shanghai, or contributed more to the expansion of the town, than the motor industry. Garages and repair shops are springing up in all directions, and the large number of valuable motor cars would strike any newly arrived occidental as exceptional. Many wealthy natives have acquired cars, which they drive themselves at times, while enormous motor vans, used by firms which have their godowns far removed from their office, the municipal

council's new motor chemical fire engine, etc., all prove how welcome and serviceable their new industry is in this flat country."

TIRE ODDS AND ENDS.

A LONDONER described in one of the automobile journals as an expert estimates the average yearly cost of upkeep of tires on motor buses at £200, and on motor cabs at £100. Therefore 1000 motor buses and 1,000 motor cabs in use would mean the expenditure of £300,000 [=\$1,430,950] per annum for tires alone.

The Avon India Rubber Co., Limited, of Melksham, have taken over the site of 35 Long Acre, and will erect thereon premises for their London depot. Meanwhile a stock of Avon tires will be kept for the London trade at 31 Brooke street, Holborn.

After much experimenting the Diamond company have placed on the market a demountable rim—something new in tire circles. The rim is of the usual clincher type, but is provided with six lugs on the outside edge which engage with notches cut in the side of the felloe and the permanent steel rim and through which and the felloe six bolts pass. The removal of the six nuts makes it possible to draw off the tire rim and to substitute another. Inflated tires are carried ready upon a rim for a breakdown and little time need be lost in making the exchange.

An automobile owner in New York, arrested for overspeeding and not happening to have enough cash about him for a bail bond, induced the magistrate to let him go by depositing his extra automobile tire.

An English export trade journal contains the announcements of a number of bicycle firms, quoting prices for export at from £2 10s. [=\$12.17] to £3 5s. [=\$15.82], for bicycles complete, except that tires are extra. Unnamed tires are quoted by some firms as low as 10 shillings [=\$2.44] per pair, with prices ranging all the way up to standard prices for leading makes. Dunlop, Palmer, and "A Won" Tires are quoted by some bicycle firms at 4s 6s. [\$6.33], and by others at a shilling or two less.

H. F. Mitzel writes to THE INDIA RUBBER WORLD from Cleveland, Ohio, that he has been working for some time upon a pneumatic tire, with the idea of developing one that should be puncture-proof. He has applied for a patent on a tire the distinctive feature of which is its equipment with more than one valve, so that in some cases it would not be necessary, in the event of a tire injury, to make repairs, but to use another valve than the first for inflation.

At the end of 1907 there were at the United States patent office 533 applications for rubber tire patents awaiting action by the examiners.

FIRE HOSE SPECIFICATIONS.

MR. H. W. FORSTER, chairman of the special hose committee of the National Fire Protection Association, who knows perhaps as much about fire hose as any one in the United States, has recently drawn up specifications for fire departments, covering both rubber and cotton hose. These specifications are exceedingly complete. Indeed, their volume precludes their present publication in THE INDIA RUBBER WORLD *in extenso*. Briefly, however, they cover the permanent marking of the hose with the manufacturer's name, the type of cotton duck used with number of plies and weights, friction tests, specifications for rubber lining, couplings and their composition, weight and flexibility of finished hose, strength tests, elongation, twist and diameter, chemical tests of rubber compounds, physical tests, manufacturers' guarantee, and finally, suggestions for the care of hose for fire department officials. The specifications referred to are preliminary in their character, and are being sent out to fire department officials and others likely to be interested, with a view to inviting comments or suggestions to be used in putting the specifications in shape for submission to the National Fire Protection Association at the Chicago meeting next May.

RUBBER PLANTERS OF MEXICO.

THE first annual meeting of the Rubber Planters' Association of Mexico was held on February 12 in the club room of the *Mexican Herald* office, in Mexico City, as planned at the preliminary meeting of the planters in October last [see THE INDIA RUBBER WORLD, November, 1907—page 55]. Most of those attending the preliminary meeting were in attendance, together with representatives of several companies who did not send delegates to the convention in October.

A number of questions bearing upon the rubber planting companies were discussed, and several papers were read, the substance of which will receive further attention in these pages at a later date. The question of the preparation of rubber for marketing was discussed by Dr. Pehr Olsson-Seffer, and Mr. A. B. Coates, of the Coliseo Sugar Plantation Co., spoke on the subject of cattle raising as an adjunct of rubber planting.

It was agreed that the association would be represented at the Rubber and Allied Trades Exhibition in London, in September

next, for which purpose 450 square feet of space in the exhibition building will be reserved. The committee who will have charge of the arrangements for the exhibits are Dr. Pehr Olsson-Seffer, chairman; Ignacio Carranza, editor of *El Heraldo Agrícola*; O. H. Harrison, J. C. Harvey and Colonel J. B. Sanborn, rubber planters; Professor F. E. Lloyd, director of the guayule experiment station of Zacatecas, and W. B. Murray, editor of the *Mexican Investor*.

It is understood that the association will ask the assistance of the Mexican government in the establishment of experiment stations in the planting interest, and the executive committee of the association will take steps looking to this end. It was decided that the leaders in the guayule rubber interest will be asked to join the association, in order that they may enjoy any benefit to be derived from the proposed experiment stations.

The officers of the association elected at the preliminary meeting in October were continued in their respective positions as follows:

President—O. H. HARRISON, La Zacualpa Rubber Plantation Co., San Francisco.

First Vice President—JAMES C. HARVEY, Mexican Mutual Planters' Co., Sanborn, Mexico.

Second Vice President—PEHR OLSSON-SEFFER.

Secretary—J. HERBERT FOSTER (new election).

Treasurer—WILLIAM VERNON BACKUS, interested in a number of planting companies, Mexico City.

Directors—W. C. Gruels, V. O. Peterson, A. B. Coates, L. A. Ostien, Ignacio Carranza.

The last thing before adjourning was the adoption of a resolution which was to the effect that another meeting, semi official in its character and dealing with practical discussions and experimental work, will be held in the heart of the plantation country upon the call of the executive committee within the next five or six months.



O. H. HARRISON.

[President of the Rubber Planters' Association of Mexico.]

NEW TRADE PUBLICATIONS.

THE BOOMER & BOSCHERT PRESS CO. (Syracuse, New York), issue their 1908 catalogue of presses—steam, hydraulic, and other—for a large number of purposes. Their list includes several styles assigned especially for rubber factory work, and which have come into wide use in the rubber industry [578" × 834". 110 pages.]

THE SIMPLEX ELECTRICAL CO. (Boston) issue "The Simplex Manual," devoted to their products of insulated wire and cables, including many convenient reference tables relating to wire capacity and the like. [414" × 614". 62 pages.]

THE JAMES MANUFACTURING CO. (Cleveland, Ohio) send a catalogue of "Klingite" accessories for the bath, including rubber tubing for shower baths and such like goods. [338" × 614". 16 pages.]

THE VULCANIZED RUBBER CO. (New York) issue a new price list of Hard Rubber Goods, which they manufacture in large variety. [434" × 812". 64 pages.] Also, a list of strictly net prices of Syringe Pipes and Syringes, of 8 pages.

BOSTON BELTING CO. issue a booklet devoted to Garden and Lawn Hose, covering their variety of brands for different purposes and giving prices. It also lists several hose accessories. [312" × 6". 24 pages.]

NEW MOTOR AND GENERAL RUBBER CO., LIMITED (London), send out a new price list of Rub-Metal Non-Skids for motor cars, with a full description of this line of goods. They also manufacture at their works at Harpenden pneumatic and solid tires and a general line of mechanical goods. [714" × 934". 16 pages.]

ALSO RECEIVED.

THE S. S. WHITE DENTAL MANUFACTURING CO., Philadelphia.—The S. S. White Dental Manufacturing Co. and Its Relation to the Dental Profession. 16 pages.

De Long Rubber Corset Co., New York.—The De Long Rubber Corset. 16 pages.

Stewart & Holihan, New York.—Rubber Stamps. Catalogue No. 34. 32 pages.

Jenkins Brothers, New York.—Supplement No. 1 to their 1907 Catalogue. Gate Valves. 12 pages.

Huston Brothers Co., Chicago.—Advice for Women (The Huston Syringe.) 16 pages.

W. F. Polson, Buffalo, New York.—Wind Shields and Auto Accessories. 24 pages.

August Kibbe & Co., Weissenfels, Germany.—Illustrierte Engros-Preisliste über Hartgummi, Metall, und Celluloid-Artikel. 55 pages.

The North British Rubber Co., Limited, Edinburgh, Scotland.—Clincher Motor Tires. Price List, 1907. 48 pages.

A WORD REGARDING "KAPAK."

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of February 1, 1908, we notice a paragraph headed "The 'M R' Hydrocarbon," in which it is said that the said product is made from a hydrocarbon "of the elaterite series," and further that the firm advertising it are the only company in the United States able to supply it. There is no such thing as "a series of elaterite," any more than there is a series of gold, silver, or lead, though there is a series of ores in which these materials may be found in combination.

There are many hydrocarbons, it is true, but few having any resemblance to elaterite, as it is the only one capable of being treated by a process of destructive distillation prior to being subjected to the action of solvents or mechanically fluxed with any other material.

In so far as our knowledge extends, the Raven Mining Co., while not claiming to control the world's supply of elaterite, are the only firm mining and reducing this material, which we are putting on the market under the brand of Kapak. Very truly yours,

RAVEN MINING CO.,

LOWELL F. LINDLEY, General Superintendent.

Chicago, February 10, 1908.

THE RUBBER TRADE IN CANADA.

IN view of the numerous rumors which have appeared in print during the past several months regarding a community of interest between the United States Rubber Co. and the Canadian Consolidated Rubber Co., Limited, it may be mentioned that an authorized statement was made public last summer from Montreal that "The United States Rubber Co. has not bought a share of stock in the Canadian concern and has not a cent's worth of interest in it." [See THE INDIA RUBBER WORLD, July 1, 1907—page 324.] The situation as there stated appears still to be true, though it may be noted that a block of stock, understood to amount to \$1,500,000, in the Canadian Consolidated Rubber Co., Limited—of their total capital of \$5,000,000—is held by a syndicate formed by capitalists having friendly relations with the United States Rubber Co. The possibility that this syndicate may ultimately transfer their holdings to the United States company doubtless is the inspiration for the rumors of consolidation which have prevailed.

* * *

THE Montreal *Herald*, in regard to a report printed in Canada that there were "warring factions" among the company's share holders, said in a recent issue: "It is said that, with only one isolated exception, the shareholders are unanimous in their position in regard to the sale of the property to the United States Rubber Co. It is understood on every hand that every concern has a price at which it will sell out, and if the shareholders of the Canadian concern can secure advantageous terms, it would be only a matter of business for them to accept. As for those shareholders who may not accept the situation, their rights will, of course, be respected by the absorbing company. That, at least, is the opinion of one of the shareholders of the Canadian company."

* * *

THE first annual meeting of the Canadian Consolidated Rubber Co., Limited, was held at Montreal, on February 26, when the financial statement of the company was presented to the shareholders. It is understood that this was very satisfactory, though the date of the meeting was too late in the month for a review of its report in this issue.

* * *

THE resignation of Mr. S. H. C. Miner from the presidency of the Canadian Consolidated Rubber Co., Limited, some months ago has been attributed to his objection to the transfer of shares in the company to the syndicate referred to, and to the policy which made the transfer possible. At any rate Mr. Miner, who has been an important factor in the development of the rubber industry in the Dominion, is planning a new rubber footwear plant there which will be entirely independent of any combination in the trade. At present his proposition relates to the location of the new factory at Granby.

* * *

WHILE the volume of the wholesale rubber shoe trade in Canada has been less than last year, according to *The Canadian Shoe and Leather Journal*, the results have been apparently satisfactory otherwise. The *Journal* thinks that the manufacturers, at least, have not done badly. "Prices on the finished product were made when the rubber market was considerably higher than when the goods came to be made, and although a good deal of rubber was contracted for at higher figures than prevailed during the manufacturing season there was considerable margin. The rubber manufacturers, therefore, made really two profits last year, one on the goods and another on the raw material." The *Journal* sees no indication of a reduction in rubber footwear prices.

* * *

At the annual meeting of the Rubber Boot and Shoe Jobbers' Association of Canada, at Montreal, on January 21, thirty-four

firms were represented. Interest in the association appears to be well maintained, and it is regarded as being of definite value to the trade. It was stated that during the coming season "seconds" in rubber footwear will be sold exclusively through the jobbing trade. Clarence F. Smith was elected president and Joseph Daoust and N. L. Martin (64 Wellington street, West, Toronto) were reelected treasurer and secretary, respectively.

* * *

A RECENT Montreal financial report quotes the bonds of the Consolidated Canadian Rubber Co., Limited, at 82½ to 85, on sales of \$14,000, and the asking price since has been higher.

IN THE FOOTWEAR TRADE.

THE current fiscal year of the United States Rubber Co., which closes with the end of this month, will show a greater total volume of business than any previous year, and the indications are that the profits will also prove larger. The detailed report will not be due, however, until near the date of the annual meeting, which occurs this year on May 19. Regarding the company's business, it is to be noted that the bulk of its production for the business year was sold before the financial flurry last fall. Furthermore, if the present winter should in the end prove unfavorable for the sale of footwear, the effect would not be apparent in the accounts of the manufacturers until the following year. It would mean that goods now in the hands of dealers would be held over and lessen the demands upon the factories next summer.

No uneasiness has been felt on account of the weather, however. It is true that there was little snow during the earlier part of the winter, but the preceding winter opened in the same mild fashion, winding up with so much snow as to clear out all the dealers' stocks. Somebody in the trade recalls that not until January 25, 1907, was there any real "rubber weather" that winter. The manufacture of rubbers was curtailed this season, however, as a precautionary measure, in view of the unsettled financial situation, but now all the factories are running.

The Boston Rubber Shoe Co.'s factory No. 2 in the Fells district of Malden, resumed work with full time on February 5, after a shutdown which began early in December. Factory No. 1 was shut down at the same time, but remained closed only a few days, and lately was working 7 hours a day. The two rubber footwear factories at Naugatuck, after having been closed since December 14, resumed work on February 10.

Rubber footwear prices have not been changed this year—either in list quotations or discounts. The policy of the manufacturers has been to keep prices as stable as possible, lists not having been revised to meet the highest prices attained in the raw material market. Prices to retailers to-day are the same as during 1906 and 1907, except that between January 1 and April 1, 1906, an extra 5 per cent. discount was offered to induce the early placing of orders, but no such discount has been allowed since the last date named.

The \$8,000,000 in funding notes of the United States Rubber Co. outstanding will have to be dealt with very shortly, but plans for their payment have been purposely deferred, with a view to securing the fullest advantage of the continued improvement in bond and money market conditions.

There appears to have been considerable investment buying of United States Rubber Co. shares of late, it being stated that the number of holders was increased by 800 during the last quarter of 1907.

It is reported from West Africa that the amount of cotton ginned at the ginneries of the British Cotton Growing Association during 1907 was 6207 bales (of 400 pounds), as compared with 5841 bales in 1906 and 2762 bales in 1905.

THE RUBBER TRADE IN AKRON.

BY A RESIDENT CORRESPONDENT.

AKRON rubber men, in interviews published in the February issue of *THE INDIA RUBBER WORLD*, took an optimistic view of the financial crisis. Judging from a statement made recently by E. C. Shaw, general manager of B. F. Goodrich Co.'s works, they were right in their opinions. Mr. Shaw says that the Goodrich company at present are employing almost as many men as they have at any time in recent years. "We have added nearly 300 employes to our force since December," he said. "Some of the departments are not running as full as is usual, but the total number of people employed lacks only a few of the usual force. The boot and shoe and specialty departments are being kept busy, but the tire department is not being rushed very hard." Most of the other rubber companies in Akron have taken on employes in large numbers since the partial shutdown in December and January.



THE B. F. GOODRICH CO.'S NEW OFFICE BUILDING.

The completion of the new administration building for The B. F. Goodrich Co. (Akron, Ohio) marks another step forward in the growth and development of this great rubber manufacturing plant. The building is an imposing five story structure 50 x 100 feet, and of the modern office building type, with large glass areas on all sides. The exterior construction shows walls of repressed brick capped with Indiana limestone.

The interior—floors, partitions and also the roof—is fireproof, and made in accordance with the Kahn system of reinforced concrete construction. The first, third, fourth and fifth stories show cement floors and selected birch wood work, while the second story containing the executive offices is of quartered oak finish and marbolithic floors.

The directors' room, extending across the entire front of the second floor, is a particularly spacious chamber, with lofty ceiling in ornamental relief and sides panelled in oak with Alps green marble base. The light fixtures are of antique silver finish making a pleasing contrast with the rich brown tone of the panelled oak.

The building is equipped with an electric elevator, lighted by electricity, largely from pendant fixtures of brushed brass, heated by direct steam, with every room provided with thermostatic apparatus for regulating the heat. Steel vaults are provided on the second, third, and fourth floors for the safe keeping of all valuable papers and records. Marble lavatories and toilet rooms are found on each floor; in fact, every modern convenience and fixture that adds to the making of a complete up-to-date office building has been supplied.

Officials of the Diamond Rubber Co. are priding themselves upon the showing made by the Thomas car in the big New York to Paris automobile race. The Thomas, which is the only American machine entered, is equipped with Diamond tires. Tire manufacturers will watch with no little interest the work of the automobiles after they leave this country. Once in Siberia, it is announced, the French car De Dion is to be equipped with solid tires for the journey through the Russian country. The Thomas machine will continue with pneumatic tires.

Beyond the purchase of a site for an addition to the present plant, the Adamson Machine Co. have done little since their incorporation with a capital stock of \$150,000. "Until times are a little improved," says Alexander Adamson, "we will not go ahead." The entire force of employes is being kept busy now in the manufacture of rubber machinery, and as soon as the demand justifies the company in building, the capacity of the plant will be doubled and perhaps tripled. Mr. Adamson claims that his company is the largest in the world engaged in the manufacture of molds for use in the rubber industry and mechanical apparatus of a like nature.

Two new tires are added to the Diamond Rubber Co.'s 1908 offerings, both for bicycles. They are the "Diamond Thread" tire and the "Diamond Oriental." The thread tire is especially adapted for racing and other fast work.

In celebration of the completion of the Diamond Rubber Co.'s mammoth new factory building, intended to house the insulated wire and Marsh rim departments, a grand ball was held on the evening of February 21, on the second floor of the big structure, under the auspices of the Diamond Rubber Workers' Relief Association and the Diamond Rubber Band. The estimated attendance was 2,500. The floor upon which the guests danced is 320 feet in length and 100 feet wide. Speeches were made by several of Akron's prominent men and a special musical program given. A buffet lunch was served in conclusion.

W. M. Perrett, manager of the Diamond Rubber Co.'s Detroit branch, has resigned, and will be succeeded by George J. Bradley, present manager of the Cleveland branch. Another bit of information regarding the "Diamond branches is included in the announcement that the company will open a branch tire house in Kansas City in March. Tire goods will be handled exclusively, and the branch operated apart from the Diamond's present mechanical goods branch in that city.

The directors elected at the annual meeting of the Swinehart Clincher Tire and Rubber Co., held last month, were J. A. Swinehart, B. C. Swinehart, W. J. Frank, J. W. Rock, C. O. Baughman and W. H. Rudgers. The officers are: J. A. Swinehart, president; B. C. Swinehart, vice president; C. O. Baughman, secretary and treasurer. In the annual report of the president was mentioned the fact that in 1904 the company had manufactured only 2,527 tires. Prejudice against solid tires, he said, has been overcome to a great extent since then, until now the company have out and in use more than 20,000 tires. He attributes the increased business to the more favorable attitude of garage men. The Swinehart company will establish branch houses in Philadelphia and St. Louis.

The plant and property of the Superior Rubber Co., of Cuyahoga Falls, Ohio, have been appraised at \$16,676.50 by court appraisers appointed in the suit brought against the concern by Calvin Vaughn. The plant has been standing idle for over a year. It will probably be sold for benefit of the creditors.

The elegant new residence of Mr. W. B. Miller, sales manager of the Diamond Rubber Co. (Akron, Ohio), when very near completion, was recently completely destroyed by fire, but, fortunately, before any of the furnishings had been put in the house. Mr. Miller has already contracted for the removal of the debris and a duplication of the destroyed house on the same plot.

The Goodyear Tire and Rubber Co. are putting out something new in the Goodyear detachable tire for Fisk rims. The only effort necessary in changing a Goodyear detachable onto a Fisk rim is the substitution of Goodyear side flanges for those furnished with the rim.

Phillip Krenrich, of Akron, has left for San Francisco, where he has accepted a position with the rubber house of Barton-Squires-Byrne, Inc.

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

THE court of chancery at Trenton has issued a decree deciding the suit of the Atlas Rubber Co., of this city, against J. Oliver Thorpe, in favor of the company. The Atlas company instituted the proceedings to establish its claim to certain rights for patents pending at Washington, and for which Thorpe had made application. Thorpe was a stockholder and general manager of the company.

The company claimed the patent rights belonged to it because Thorpe, at the time the company was organized, agreed to assign them to it. The company alleged that later it discovered that Thorpe was taking steps to assign the patents to other parties, whereupon the suit was brought. Under the court's decision the company is given complete control of the rights when the patents are obtained, and Thorpe must assign all his rights therein.

The Atlas Rubber Co. was incorporated on March 9, 1907, with an authorized capital of \$125,000. The principal stockholders were Barton B. Hutchinson, Dr. H. G. Norton, and Thorpe, all of Trenton. Thorpe held shares of the par value of \$2,500, which on February 14 were sold at sheriff's sale to satisfy a claim against Thorpe held by a bank at Allentown, N. J. He is now entirely out of the company.

The invention involved in the litigation consists of a method of applying spiral wire armor to the interior of hose. The armor is placed between an inner rubber tube and the outer woven section. The officers of the company claim the invention to be a very valuable one. It may be applied to all kinds of air, steam, water and other hose. The company is now doing business under a trade arrangement with the United and Globe Rubber Manufacturing Co., of Trenton. The machines for making the improved hose have been set up in the United and Globe factory and the latter company superintends the manufacture, the Atlas company marketing the product. Former Senator Hutchinson is president of the company and E. N. Wright secretary and treasurer.

* * *

THE Dyson Rubber Co. has gone out of existence, its charter having been revoked for non-payment of the state tax on miscellaneous corporations. The Dyson company was organized nearly four years ago, George A. Dyson, who then withdrew from the Dyson & Lawshe Rubber Manufacturing Co., being its head. Since the Dyson company ceased to do business Mr. Dyson has returned to the old concern. The latter has been reorganized and is now known as the Leicester Rubber Co. Its factory is located on Paul avenue and it manufactures mats, soles, heels, and other molded goods.

* * *

THE National Metal Back Rubber Tiling Co. have resumed operations after a temporary shutdown due to the financial stringency. The concern manufactures rubber tiling for floor covering, the tiles being connected in an ingenious manner with strips

of metal on the under side. The tiling is made in several colors and very attractive patterns can be designed as the result. The tiles are hexagonal in shape and near each edge on the under side a small metal bar is inserted in the rubber. A narrow strip of metal engages this bar and running to the adjoining tile engages that in the same manner. This method is carried out throughout the entire floor covering. The bottom of the tiles have indentations so that the metal backs do not interfere with a smooth surface. The company are located in the factory formerly operated by the Dyson Rubber Co., at the corner of May and Beakes streets.

* * *

SEVERAL Trenton rubber manufacturers are active in the new Chamber of Commerce, which has succeeded the old Board of Trade, and for a year has done much for the commercial advancement of the New Jersey capital. E. D. Cook, of the Hamilton and Acme rubber manufacturing companies, is chairman of the transportation committee, and last year was first vice president. Clifford H. Oakley, formerly general manager of the Grieb Rubber Co., and now connected with the Combination Rubber Manufacturing Co., is vice chairman of the house committee. General C. Edward Murray, of the Empire and Crescent companies; W. J. B. Stokes, city treasurer and head of the Trenton and Home rubber companies, and other Trenton rubber men are members of the organization and take an active part in its work. The Chamber of Commerce took a leading part in the movement for the removal of the Perriwig bar from the channel of the Delaware river. The improvement has been completed and gives all the local factories deep water transportation to Philadelphia. The Chamber of Commerce will give a dinner to the Hon. William H. Taft, the secretary of war, on the evening of March 23.

* * *

PATRICK A. DURNAN, for seventeen years with the Home Rubber Co., and one of the best known rubber workers in Trenton, delivered a lecture before the Catholic Club on the evening of February 18 on "The Rubber Industry." He discussed the growth and importance of the rubber industry in Trenton and traced in an interesting and graphic manner the progress of the manufacture of rubber from the raw material to the finished product. During the course of his talk Mr. Durnan exhibited several samples showing different kinds of rubber in its crude form and after it had passed through the various stages of manufacture. A large audience thoroughly enjoyed the instructive address.

* * *

"TRADE is not very brisk and there is nothing special to report," said John E. Clancy, general manager of the Mercer Rubber Co., when asked for news. Continuing, Mr. Clancy said it was his opinion that the rubber business would not get back to a normal level until after the presidential nominations have been made. "People are buying," he stated, "but mainly 'from hand to mouth.' Trade will be better, I think, but not before the presidential campaign."

H. E. Parker, associate and membership secretary of the Trenton Young Men's Christian Association, who resigned to become general of the Plainfield, New Jersey, Association, was given a farewell surprise in the association building February 8, when a present was tendered to him by a delegation from the Home Rubber Co., where Mr. Parker had been conducting a Thursday noon Bible class.

All the Trenton labor unions united on the evening of January 31 in a benefit theatrical presentation for the striking rubber workers of Lambertville, New Jersey. There was a good audience and a considerable sum was realized.

The buoys off Sandy Hook, at the entrance to New York harbor, are lighted by means of cables supplied by the Bishop Gutta-Percha Co., of New York.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

REPORTS from the leading rubber goods dealers in rubber in San Francisco show that the improvement which has been noticed for several weeks past is getting even better every day. Although it has been slow, it is sure, and new avenues of commerce are being developed constantly. Retailers who have been allowing their stocks to run very low are now compelled to stock up again, and as the outlook throughout California has grown very bright on account of the excellent crop prospects, they are not so slow in ordering liberally. It is the general feeling that trade will soon be normal, and although there has been a general holding back it was more because people could not get hold of money for the time being rather than they did not have sufficient confidence in the future. Now that money has become easier to get the retailers look forward to a very good business and are beginning to order accordingly. Not only have the bountiful supply of rains caused a feeling of faith in the outcome of the next year to arise, but work in the country is becoming more plentiful, particularly in the mining districts.

The Western Belting and Hose Co. report a satisfactory business at their new permanent location, No. 679 Howard street, where they carry a general supply in rubber goods.

Barton-Squires-Byrne, Inc., are actively engaged completing their new plant, and report that business looks well for the future. A new factory foreman has been secured for the company from Akron, Ohio.

Mr. E. T. Watros, representing the Voorhees Rubber Manufacturing Co. (Jersey City, N. J.), is now in San Francisco, and states that he finds business very favorable and a great deal better on the Pacific coast than he had been led to believe.

The Pacific Coast Rubber Co. are now installed with a very complete stock of rubber belting and general rubber stock in its modern quarters on Mission street. The firm is now permanently located and anticipates an excellent business for the coming season. Mr. H. C. Norton, of this company, will leave before March 25 on his regular yearly trip through the manufacturing centers of the East.

The Gutta Percha and Rubber Manufacturing Co. have just moved over from the temporary location which the firm has occupied across the bay, in Alameda, since the fire, to modern and fireproof quarters on First street near Mission, where all hands are busy getting the goods arranged in the new store.

Ed. Garratt, formerly for many years manager of the Seattle branch of the Gorham Rubber Co., has lately resigned to go into business for himself, and he is now in San Francisco with the Calahan boiler compound. He will make Seattle his headquarters.

The Gorham Rubber Co. of San Francisco have decided to systematize farther the buying and selling of goods for the three stores, including the branches in Seattle and Los Angeles, so that they will not be buying independently of one another as heretofore. For this purpose W. H. Heckmann has been appointed to the new position of general buyer and salesman for the company's three branches. This firm has installed an entirely new department, devoted to fire appliances and supplies, which will be devoted not only to fire hose and accessories, but to everything else that a fire department needs. Mr. J. L. Phillips is the general manager of the new department, with headquarters in Seattle, and the manager in San Francisco will be Mr. C. A. Taber.

Mr. G. Chan has just returned from his eastern trip by way of Los Angeles, and within a week he will go on up to the Seattle branch. "I noticed a general improvement in the factories throughout the East," he said, "and I notice the same thing in Los Angeles, where we look forward to a business which will be bright. All along business just at this time is probably not as

heavy as it was last year, but at least we are getting away from the slump. Up around Seattle the mills are starting up and things are getting better. We are shipping garden hose from San Francisco now in large quantities, and that with our export trade is holding up business very favorably."

Mr. McMillan has resigned as secretary of the Sterling Rubber Co. and Mr. A. R. Ellert has been chosen to take the position. Mr. Ellert has recently made a trip through the northern valleys as far up as McCloud in California, and coming down through the Sacramento, the Napa and the Sonoma valleys, where he found business so greatly improved and the confidence so much restored that results were greater than any trip that has been made through that portion of the state for some time, showing that there is a general improvement in the interior districts.

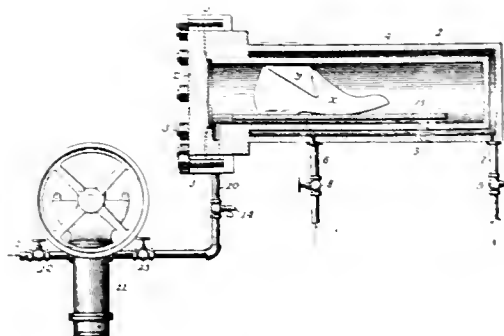
Mr. Chase, of the Bowers Rubber Works, states that business has been so favorable with them that they feel the dull times less than ever, and that all along business has been picking up remarkably well. "In fact," he said, "the sales for the past four months, which have been the worst of the dull period, have been in excess of any corresponding year in the company's history."

The Phoenix Rubber Co. have opened an agency for Republic tires at No. 606 Van Ness avenue in the permanent building on the corner of Golden Gate avenue. Mr. C. P. Overton will be the manager of the new branch.

The rubber tire representatives and agencies are preparing to make a great display of tires at the San Francisco automobile show, which will be held at the Coliseum March 2-8.

COMPRESSED AIR IN A VULCANIZER.

A RECENT patent issued to Augustus O. Bourn, of the Bourn Rubber Co., Providence, Rhode Island (No. 876,431), covers the vulcanization of rubber goods in dry heat, with the novel feature that the air in the vulcanizer is compressed. As is very well known, air is a poor conductor of heat. Its non conductivity, indeed, is the reason that dry heat cures take



BOURN'S PROCESS OF VULCANIZATION.

from 10 to 40 times as long as where the heat is carried to the rubber from some good conductor. By compressing the air, however, it is found to conduct heat very much more quickly and it is also claimed that the compression solidifies and toughens the rubber compound. Governor Bourn has experimented with this process for something like seven years, and is to be congratulated on securing a good clean patent protecting his invention.

MENTION is made of the arrival at Bordeaux of shipments of rubber for Michelin & Co. (Clermont-Ferrand), under their contract to take 600,000 pounds a year from the Galvez Rubber Estates, Limited, of London and Bolivia.

MITTELDEUTSCHE Gummiwaren-Fabrik Louis Peter, Actiengesellschaft, of Frankfurt a. M., Germany, has established a branch in Turin, at 40 via Carlo Alberto. They now have 22 branches.

News of The American Rubber Trade.

END OF THE ATLANTIC RUBBER SHOE CO.

THE trustees on dissolution of the Atlantic Rubber Shoe Co. will offer for sale at auction, on March 29, all the assets of this corporation not already sold, including patents granted to Henry J. Doughty for making rubber shoes by machinery; certain licenses under other patents of Doughty; and machines, molds, and lasts some time used in the factory of The Atlantic Rubber Shoe Co. at Cranston, Rhode Island. The company's factory was sold at auction on November 2, 1906, and passed into the possession, it is understood, of the United States Rubber Co., but has not since been operated. It may be noted here that the trustees on dissolution of the Atlantic company are either directors in or employes of the United States Rubber Co.

The Atlantic Rubber Shoe Co. obtained a charter under the laws of New Jersey in 1901, authorizing a capital of \$10,000,000. The object was to revolutionize the manufacture of rubber footwear by the means of new mechanical appliances invented by Henry J. Doughty, and which attracted the attention of rubber men in all countries to an almost unprecedented extent. A factory was erected on an extensive scale at Cranston, Rhode Island, and operated for a few months, closing finally in December, 1904. Later an attempt was made to reorganize the business, and as a step to that end the capital stock was written down to \$800,000, since which time the only intelligence made public regarding the company is what is summarized above.

Following the incorporation of the Atlantic Rubber Shoe Co. a series of corporations was formed under the laws of New Jersey for exploiting the Doughty system of footwear manufactured under the various foreign patents. On March 14, 1904, identical articles were filed by the following new companies, each with \$100,000 capital authorized:

German-American Rubber Shoe Co.
Anglo-American Rubber Shoe Co.
Belgian-American Rubber Shoe Co.
Franco-American Rubber Shoe Co.
International Rubber Shoe Co. (to operate in Russia).

It is not understood that any active steps were ever taken by the companies here named, and it appears that they have ceased to exist without the formality of any act of dissolution. In other words, they come to an end simply by doing nothing. On January 6, 1908, the comptroller of the state of New Jersey reported a list of corporations which had failed for two years to pay the corporation taxes assessed under the laws of the state, after which the governor issued a proclamation (dated January 18 and made public on February 6), declaring that "the charters of said corporations are repealed and all powers conferred by law upon such corporations declared inoperative and void." This act of the governor does not, of course, affect the validity of the foreign patents, which presumably remain the property of the patentee.

COTTON DUCK NET PROFITS LESS.

THE annual report of the Consolidated Cotton Duck Co. for the year ending December 31, 1907, shows gross income from sales of \$10,621,387, a gain of \$680,236. Net earnings were \$1,130,566, against \$1,301,881.39 for 1906 and \$917,172.08 for 1905. The cost of material, labor, supplies, etc., was \$9,319,162, an increase of \$891,735. The labor account alone shows an increase of \$221,000 on a small increase of production. Of the surplus of \$704,566, \$242,570 is derived from the operations of the Consolidated Cotton Duck Co. and \$461,987 from the operations of Mount Vernon-Woodberry Cotton Duck Co. The regular semi-annual dividend of 3 per cent. is payable on April 1. At the annual meeting, at Baltimore, on February 17, the directors were reelected.

The retiring directors and officers of the Mount Vernon-Woodberry Cotton Duck Co. were reelected at the same time, and a semi-annual payment of 1½ per cent. made upon the company's income bonds. The annual meeting of the J. Spencer Turner Co., selling agents for the Consolidated Cotton Duck Co., resulted in the reelection of directors and officers. The report showed net earnings of \$175,000 for 1907, out of which interest on bonds to the amount of \$90,000 was paid and \$77,000 worth of bonds were redeemed.

NEW YORK MERCHANTS OPPOSE THE ALDRICH BILL.

THE Merchants' Association of New York, which has grown steadily in importance, and now embraces in its membership a number of important rubber firms, has issued a bulletin in opposition to the so-called Aldrich emergency currency bill, now before the United States Senate. The association's committee requests THE INDIA RUBBER WORLD to state that the arguments which occur to them as justifying opposition to the currency bill will be sent to any part of the country to applicants addressing the offices of the association, at No. 60 Lafayette street, New York.

SEWARD RUBBER CO.—RECEIVER APPOINTED.

LUCIUS C. RYER, of Hartford, was on February 18 appointed temporary receiver for the Seward Rubber Co., by Judge Shumway, of the superior court, following a meeting of the directors of the company, at which it was voted to discontinue business. The Seward Rubber Co. was incorporated November 23, 1905, with \$200,000 capital authorized, and erected a factory at Berlin, Connecticut, which has been running on mechanical goods and mold work. The corporation is declared to be solvent, with assets of the cash value of about \$64,000, and liabilities about \$28,800. The application states that the corporation is at present threatened with various suits under which attachments may be made and its property wasted. The company was organized by William Seward, formerly vice-president and general manager of the Hartford Rubber Works Co., who has been president of the Seward company.

NIAGARA RUBBER CO. WIN A SUIT.

THE suit of the Niagara Rubber Co. (Lockport, New York) against Albert Freeman, president of the Trident Tire Co. (New York City), to secure payment for tires made for the latter concern, resulted in a judgment in favor of the plaintiff for \$7,500, with interest. Mr. Freeman had bound himself personally to secure the contract. The trial was in the New York supreme court at Lockport. It is reported that efforts are being made to reorganize the Trident company.

MR. MAYO'S SUCCESS AS AN ASSIGNEE.

THE Knox Automobile Co. (Springfield, Massachusetts), which assigned in July last with \$975,000 assets and \$531,000 liabilities, has been reorganized. The assignee was Alfred N. Mayo, the treasurer of The Fisk Rubber Co., to whose good management the rehabilitation of the company is credited. The assignee issued \$500,000 in preferred stock, which was accepted by the creditors in full satisfaction of their claims.

NEW YORK RUBBER CO.'S ANNUAL.

AT the annual meeting of shareholders of the New York Rubber Co., on January 28, the following were elected trustees for the ensuing year: John P. Rider, A. Montgomery, Jr., John Acken, V. M. W. Suydam, Rufus A. Brown, W. H. L. Lee, and E. S. Woodward. The officers elected later were: John P. Rider, president; John Acken, vice president; Henry Montgomery, second vice president; Rufus A. Brown, secretary and treasurer.

REVERE RUBBER CO.'S CLERKS AT DINNER.

EVERY year the clerks and salesmen of the Revere Rubber Co. (Boston) have a banquet. The sixth of these events took place on the evening of February 14, at the Parker House, Boston, covers being laid for 60. The affair was under the direct charge of an entertainment committee consisting of F. H. Westwood, who acted as toastmaster; W. D. Lockerty, W. S. Townsend and G. Arthur Gray. After discussing an excellent dinner, the diners enjoyed a vaudeville entertainment under the management of "Chick" Fox, who made the Boston Cadets famous in their theatrical entertainments. Fun was adapted in the way of local hits and surprises, so well that it caused appreciative and uproarious laughter at almost every point. For example, the well-known song "H-A-R-R-I-G-A-N" became "S-I-L-L-I-M-A-N," a man not of Irish blood but of rubber blood, whatever that may be. The music for the evening was furnished by the Olympia Orchestra, and taken as a whole the entertainment was equal to any of the previous successes.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending February 21:

COMMON STOCK.

Week	Feb. 1	Sales 1,000 shares	High 22 $\frac{1}{4}$	Low 22
Week	Feb. 8	Sales 2,100 shares	High 22	Low 18 $\frac{7}{8}$
Week	Feb. 15	Sales 700 shares	High 18	Low 17 $\frac{3}{4}$
Week	Feb. 21	Sales 500 shares	High 18 $\frac{1}{4}$	Low 18

For the year—High, 26, Jan. 14; Low, 17 $\frac{3}{4}$, Feb. 10.

Last year—High, 52 $\frac{1}{2}$; Low, 13 $\frac{1}{2}$.

FIRST PREFERRED STOCK.

Week	Feb. 1	Sales 935 shares	High 83 $\frac{3}{8}$	Low 81
Week	Feb. 8	Sales 812 shares	High 81	Low 80 $\frac{1}{2}$
Week	Feb. 15	Sales 905 shares	High 80 $\frac{1}{4}$	Low 78
Week	Feb. 21	Sales 843 shares	High 79 $\frac{1}{2}$	Low 76

For the year—High, 88 $\frac{1}{2}$, Jan. 9; Low, 76, Feb. 19.

Last year—High, 109 $\frac{1}{4}$; Low, 61 $\frac{1}{4}$.

SECOND PREFERRED STOCK.

Week	Feb. 1	Sales ... shares	High ..	Low ..
Week	Feb. 8	Sales ... shares	High ..	Low ..
Week	Feb. 15	Sales 150 shares	High 50	Low 50
Week	Feb. 21	Sales 220 shares	High 50	Low 42

For the year—High, 61 $\frac{1}{4}$, Jan. 23; Low, 42, Feb. 21.

Last year—High, 78 $\frac{1}{4}$; Low, 39.

MIDGLEY MANUFACTURING CO.'S ANNUAL.

At the recent annual meeting of the Midgley Manufacturing Co. (Columbus, Ohio), manufacturers of the Midgley automobile tire rim, these were elected directors: Ernest Hopkinson, Thomas Midgley, Alexander O. Holroyd, Richard Ward and Charles S. M. Krumm. Mr. Midgley is president and general manager, Messrs. Holroyd and Krumm vice-presidents and Mr. Ward secretary and treasurer and assistant general manager.

KAUFMAN COMPANY'S BUILDING PLANS.

THE Kaufman Rubber Co., Limited, of Berlin, Ontario, the incorporation of which was reported in this journal in December, advise THE INDIA RUBBER WORLD that they are preparing to begin building their footwear factory in the spring. They have planned a structure of reinforced concrete, four stories and basement, 200x60 feet, with a wing 60x60 feet. They hope to be ready for operation in October and to participate in next winter's trade.

NEW ENGLAND RUBBER CLUB'S DINNER.

THE winter dinner of the New England Rubber Club is to occur on March 11 at the Algonquin Club, Boston. The date is set later than usual because the committee planned to secure Governor Hughes, of New York, as the principal speaker. Through the efficient work of Mr. E. E. Wadbrook, the governor's consent was secured, but later it was discovered that the very busy executive had agreed to speak to two other clubs the same evening and the committee fearing that the diners would see little of the distinguished gentlemen, decided that it would be better to secure him at some future date for an extended ad-

dress. The dinner plan was therefore revised, the present program being an address by General Charles H. Taylor, the veteran editor of the Boston *Globe*, who is accounted one of the best after dinner speakers in New England, and a speech by Lieutenant-Governor Draper, to be followed by brief addresses by Mayor Hibbard, of Boston; Louis Frothingham, and possibly by Archbishop O'Connell. Full particulars of the dinner plans will be sent shortly to members of the Club.

NEW JERSEY CORPORATIONS SUSPENDED.

THE governor of New Jersey announces the suspension from the list of corporations formed under the laws of that state, on account of the non payment of corporation taxes for 1905, of a large number of companies. The list of lapsed charters includes those of the following concerns related more or less to the rubber interest. It may be suggested that most of the companies named never really engaged in business, and it is presumable that little of their authorized capital was paid in:

Dyson Rubber Co. Incorporated August 11, 1903; capital, \$25,000. The plant was bought in 1906 by Philip McGrory and is operated now by the National Metal Back Tiling Co.

Inland Insulation and Rubber Co. Incorporated September 19, 1903.

Franklin Rubber Manufacturing Co. Incorporated May 29, 1903.

Mexican Rubber Co. Incorporated September 10, 1902.

Newark Pneumatic Puncture Proof Tire Co. Incorporated August 12, 1904; capital, \$25,000. To make tires under a patent of John Millar.

Nicaragua Rubber Co. Incorporated August 25, 1904; capital, \$50,000. The company was to acquire a plantation of Ceara rubber in Nicaragua, but failed to secure sufficient capital.

Parquetry Rubber Tile Co. Incorporated October 22, 1904; capital, \$300,000. There is no record of any business done.

Sterling Rubber Manufacturing Co. Incorporated June 15, 1903; capital, \$300,000. Registered office at Camden, N. J.

Tredair Rubber Co. Incorporated January 30, 1903.

Neponset Rubber Co. Incorporated May 22, 1904, as the Old Colony Rubber Co.; capital, \$125,000. Name changed to Neponset in June, 1904. Began the manufacture of mechanical goods at Hyde Park, Massachusetts, in a factory formerly used by the late Boston Gossamer Rubber Co. Closed after a sheriff's sale of some effects in the factory August 26, 1905.

The list of suspensions embraces also five rubber footwear companies, formed in connection with the Atlantic Rubber Shoe Co., which are referred to more fully on another page.

TRADE NEWS NOTES.

THE annual meeting of the B. & R. Rubber Co. (North Brookfield, Massachusetts, February 4) resulted in the election as directors of Thomas G. Richards, Charles C. Beebe, Alvin F. Sortwell, Robert M. Currier, and George R. Hamant. Mr. Richards was reelected president and Mr. Beebe vice president and treasurer.

At the annual meeting of C. Kenyon Co. (Brooklyn, New York), manufacturers of raincoats and rubberized coats, on January 21, these officers were reelected: C. Kenyon, president; H. L. Kenyon, vice president; C. Kenyon, Jr., treasurer; George Kenyon, secretary.

An *interim* dividend at the rate of 8 per cent. per annum has been declared on the ordinary shares of The Okonite Co., Limited, for the quarter ended December 31. The Okonite company, though organized in the United States, has been for a number of years registered as a British company.

The G & J Tire Co. have removed the Philadelphia branch to larger quarters at No. 715 North Broad street.

Rutherford Rubber Co., January 16, 1908, under the laws of New Jersey; capital authorized, \$300,000. Incorporators: H. O. Coughlan, L. H. Gunther, and John R. Turner, all of No. 15 Exchange place, Jersey City, N. J. The object of the company is stated to be the manufacture of motor tires, and reports connect it with the plant of the Electric Rubber Manufacturing Co. (Rutherford, N. J.), in liquidation, but definite information is lacking as yet.

HOOD RUBBER CO.—INCREASE OF CAPITAL.

THE Hood Rubber Co. (Boston) have decided to increase their capital by \$1,000,000 in cumulative 7 per cent. shares of \$100. Only 5,000 of the new shares have been offered at par, of which the greater part has been subscribed; the remaining 5,000 shares are held for sale later at a higher price. The company's last statement reported their capital at \$1,000,000, with a surplus of \$928,000. The increased share issue is for working capital and not for enlarging the plant. The company's plant, at East Watertown, has a floor area of about 450,000 feet, and they are understood to be doing a business of about \$6,000,000 a year.

GEORGE S. ANDRUS.

MR. GEORGE S. ANDRUS (not Andrews, as the uninitiated insist upon saying it), as chronicled in the last issue of THE INDIA RUBBER WORLD, has left La Crosse, Wisconsin, and is now connected with the Apsley Rubber Co., at Hudson, Massachusetts. Mr. Andrus has had exactly the sort of experience that fits him for an organization like the one he has joined. Born in Michigan in 1805, his business experience embraces running a general store, a year as "cow puncher" in the Indian Territory, workman, calendar man, and then superintendent of a Western rubber factory; later the founder of a prosperous factory devoted to rubber clothing and general mold work; still later the moving spirit in the establishment of a prosperous rubber shoe factory, his manufacturing experience has been especially complete. When one considers also that he is accounted a shrewd and capable purchaser, that he could sell more goods than any of his traveling men, and that he has invented numerous specialties that have been very profitable, it will be seen that he has a range of ability and faculty that must him extremely valuable for such a position as that which he has accepted.



GEORGE S. ANDRUS.

EUREKA FIRE HOSE MANUFACTURING CO. ELECTION.

At a meeting of the shareholders of the Eureka Fire Hose Manufacturing Co. (New York), on January 14, the following directors were chosen for the ensuing year: Benjamin L. Stowe, N. F. McKeon, and George A. Wies. The officers elected for the year are B. L. Stowe, president; I. B. Markey, vice president; G. A. Wies, vice president and treasurer; N. F. McKeon, secretary; W. F. Wies, assistant treasurer; W. F. Volz, assistant secretary.

A GROWING PHILADELPHIA CONCERN.

THE Manufacturers' Co., of Philadelphia, producers of a special quality of non acid reclaimed rubber and makers of a line of molded rubber goods which is meeting with much favor, have an excellently equipped factory at Kensington (Philadelphia). Their office is in the Betz building, and the business of the company generally under the management of Mr. Frank Camp.

RUBBER WEIGHERS AND SHIPPERS AT DINNER.

On Saturday evening, February 1, the first annual dinner of the weighers and shippers representing New York rubber importers was held at the Little Hungary café. Those present

were L. W. Dumont, J. C. Goudey, C. P. Gates, G. W. Sniffen and E. P. Sniffen, from The General Rubber Co.; A. J. Jungclauss, C. S. Leslie, James Leslie, F. E. Nixon, and Charles Jackson, from Pool & Arnold; E. J. Bennett, H. F. Frey, W. A. Case, C. A. Morse, S. H. Sears, Jr., and R. S. Case, of the New York Commercial Co.; J. H. Thorndike and William Vyse, Jr., from A. T. Morse & Co.; and C. L. Armstrong, of Booth & Co. Mr. Dumont acted as toastmaster.

B. LOEWENTHAL & CO.—NEW WAREHOUSE.

B. LOEWENTHAL & Co., the extensive scrap rubber merchants of Chicago and New York, about April 1 will remove their headquarters in the latter city to No. 450 Greenwich street. Their new premises are a modern warehouse building of four stories and a basement. Their New York offices will be located here. Some new devices for the handling of scrap rubber exclusively, they state, will place them in a better position than ever in the handling of this class of goods.

RUBBER MANUFACTURERS' MUTUAL INSURANCE.

At the annual meeting of the Rubber Manufacturers' Mutual Insurance Co., in Boston, on January 22, the officers and directors were re-elected. The number of directors was increased from 14 to 15, and Charles T. Plunkett, of Adams, Massachusetts, added to the board. He is president of the Industrial Mutual Insurance Co. The financial statement presented at the meeting, and relating to December 31, 1907, follows:

Amount at risk.....	\$54,082,174.00
ASSETS.	
Bonds at market value.....	\$316,497.50
Cash in bank and office.....	33,587.83
Premiums in process of collection.....	23,244.40
Accrued interest.....	5,285.40
Gross cash.....	\$378,615.13
LIABILITIES	
Unadjusted losses.....	\$2,046.00
Taxes (accrued but not yet due).....	1,519.79
Unearned premiums on outstanding risks.....	249,617.63
	\$245,137.42
Net cash.....	\$133,477.71
Assessment liability.....	2,406,716.30
Total assets applicable to payment of losses.....	\$2,540,194.01
Average dividend paid in 1907, 70.5 per cent.	

TRADE NEWS NOTES.

A FIRE in the plant of John A. Roebling's Sons' Co. (Trenton, New Jersey), on February 5, destroyed the carpenter shop and one of the rope wire shops, but did not reach the insulating department. The loss was estimated at about \$300,000, one-third covered by insurance.

Escobar, Gogorza & Co., importers and exporters, No. 24 State street, New York, have filed a petition in bankruptcy, with liabilities of \$200,933 and assets \$68,311. J. Parker Kivlin has been appointed receiver of the assets. The firm's business is largely with South American countries and they have been receivers of "Central" rubbers in New York for a number of years.

A blotting stone instead of a piece of blotting paper is a desk novelty that seems to work all right. It certainly blots perfectly and will last forever. Set in its neat aluminum frame it is a very attractive advertising novelty gotten out by the Pennsylvania Rubber Co. (Jeannette, Pa.)

The Hayes Rubber Co. have leased for a long term of years the store, basement, and sub basement in the building at No. 57 Warren street, New York.

Otto Braunwarth has become sole proprietor of the Broadway Rubber Tire Works, at No. 51 West Sixty-third street, New York.

The Empire Automobile Tire Co. (Trenton, New Jersey) have opened an uptown branch in New York, at the junction of Broadway, Seventy-third street, and Amsterdam avenue, facing the Seventy-second street subway station.

The New York commissioner of street cleaning advertised recently for bids for supplying 2180 pairs of horseshoe pads.

NEW INCORPORATIONS.

Ennis Rubber Manufacturing Co., February 7, 1908, under New York laws; capital \$50,000. Directors: Frederick J. Ennis (No. 157 Halsey street, Brooklyn, N. Y.); James M. Bessey and Charles N. Foster, New York city.

P & H Tire Co., January 30, 1908, under New York laws; capital, \$20,000. To manufacture and sell the P. & H. inner tube for tires. It differs from the ordinary tube in that it is reinforced with two layers of fabric, laid in such a way as not to interfere with elasticity. Roger G. Howell is president, and Paul M. Pelletreau secretary and treasurer. John D. Prince has been appointed general manager. The offices are at No. 1057 Broadway, New York.

The Hadley-Gill Cement Co., December 10, 1907, under the Massachusetts laws; capital, \$25,000. To manufacture rubber cements, at Salem, Mass. Incorporators: Albert H. Hadley, Lynn, Mass.; Mary Louise Gill and Michael J. McCafferty, Saugus, Mass.

Adamson Machine Co., December 10, 1907, under the Ohio laws; capital, \$150,000. To succeed to the business of Alexander Adamson, manufacturer of rubber factory appliances and other machinery, at Akron, Ohio. Incorporators: Alexander Adamson, C. J. Gilletly, R. B. Koontz, C. F. Adamson, and W. E. Slabaugh.

Jersey City Specialty Co., January 10, 1908, under the laws of New Jersey; capital authorized, \$50,000. Incorporators: Clement Eckrode, Alpheus L. Mundy, H. Raymond Groves, and M. Irving Demarest, all of New Brunswick, N. J.

Randall Insulated Wire Co., January 22, 1908, under the laws of New York; capital, \$100,000. To make and deal in insulated wire. Directors: Franklin S. Randall, Weehawken, New Jersey; Ira Mowery, Morristown, New Jersey; Bernard G. Heyn, No. 60 Wall street, New York.

TRADE NEWS NOTES.

EVERY employee of the New York Rubber Co., at the factory at Matteawan, N. Y., on February 8 received an envelope inscribed: "You will find inclosed an extra week's pay, with the company's best wishes."

The Elkhart Rubber Works (Elkhart, Indiana), issue a very practical descriptive circular of rubber pump valves which is a specialty of theirs. They describe in detail two types of hot water valves, special valves for acid, oil, ammonia, and syrups, 6 types of cold water valves, 4 condenser valves in red and gray, and soft tough gray valves for air. Each valve is given its special number for convenience in ordering.

The Goodyear Rubber Co.'s footwear factory, at Middletown, Connecticut, at the beginning of the month increased their running time from 40 to 50 hours a week.

Mr. E. E. McConnell, manager of the Interlocking Rubber Tiling department of the New York Belting and Packing Co., Limited, sailed for Europe on the *Kaiserin Augusta Victoria* on February 15, in connection with several large contracts recently made for this line of tiling in France and England.

R. S. Harding, for several years in charge of the mailing department of the Boston Rubber Shoe Co., has been transferred to the similar department in the New York offices of the United States Rubber Co., at No. 42 Broadway.

The regular quarterly dividend of $1\frac{1}{2}$ per cent. on the preferred shares of the Manufactured Rubber Co. (Philadelphia) is payable March 2.

Mr. E. H. Stedman, a cousin of Arthur W. Stedman, of George A. Alden & Co., Boston, and a brother of Dr. J. C. Stedman, a well-known figure in the New England Rubber Club, has accepted a position with the Voorhees Rubber Manufacturing Co., as New York city salesman.

The Ohio Rubber Co. (Cleveland, Ohio) have opened a rubber footwear department, and have secured the agency in their territory for the Boston Rubber Shoe Co.'s lines.

MATTSON RUBBER CO.—A CORRECTION.

THROUGH inadvertence a mention of the Mattson Rubber Co. (Lodi, New Jersey) in the last INDIA RUBBER WORLD described them as manufacturers of Druggists' Sundries. The company are too well known in the trade for such a statement to mislead any one, but we are desirous none the less of correcting it. In addition to the various lines of goods which the Mattson company have been manufacturing for so many years, they have built up a large business lately in tire repair stocks.

CONSOLIDATED RUBBER TIRE CO.

It is reported in financial circles that the annual interest payment due on April 1 on the 4 per cent. income bonds of the Consolidated Rubber Tire Co. will be 2 per cent. These bonds were issued under an agreement dated April 1, 1901, in lieu of a certain amount of preferred stock retired, and the volume now outstanding is \$2,850,500. On April 1, 1902, 3 per cent. was paid on the debentures, out of the earnings of 1901, since which time the payments have been: $1\frac{1}{2}$ per cent. in 1904 and 1905; 2 per cent. in 1906; and 3 per cent. in 1907.

POPE MANUFACTURING CO.'S PROFITS.

THE profits last year of the Pope Manufacturing Co., in the hands of receivers since August 14, 1907, are reported to have reached \$400,000. The prospects are stated to be good for the reorganization of the company on a sound working basis, involving the continuance of the plants at Hartford and Westfield, while the other plants will be disposed of. It is understood that Colonel Albert A. Pope, the founder of the company, will retire.

TRADE NEWS NOTES.

THE Elastro Co. (Hartford, Connecticut), manufacturers of "Tire Life," announce that, after having engaged in filling motor car tire shoes with their compound in solid form, they have perfected a system of molding in the compound, a pneumatic core capable of being inflated or deflated. This core is referred to as being about one-third the size of the inner tube and is placed close to the rim, making a perfect riding cushion. At the same time, it is thoroughly protected from puncture and cannot blow out.

American Rubber and Leather Belting Co. are a new jobbing house in mechanical rubber goods and mill supplies, at No. 222 Market street, St. Louis, and No. 1304 Union avenue, Kansas City. They buy largely from the Boston Woven Hose and Rubber Co., and the Page Belting Co. T. D. Davis is president of the company.

Mr. Arthur L. Kelley, president of the Mechanical Fabric Co. (Providence, Rhode Island), has been elected president of the Narragansett Electric Lighting Co., of Providence, to succeed Marsden J. Perry, who resigned on account of the pressure of other business.

The necessary legal proceedings having been taken, the name of the India Rubber and Gutta Percha Insulating Co. has been supplanted by Habirshaw Wire Co. The offices remain at No. 253 Broadway, New York, and the works at Yonkers, N. Y.

At the recent election, by the Rhode Island legislature, of a United States senator, resulting in the choice of George Peabody Wetmore, the name of Colonel Samuel P. Colt was formally placed in nomination and several votes were cast for him, although he had announced definitely that he was not a candidate for the position.

Mr. Fred A. Hodgman, superintendent of the Hodgman Rubber Co., who have a factory at Tuckahoe, New York, lives near Travers Island, and is one of the enthusiastic gunners of the New York Athletic Club who go to the island every week for trap shooting. The newspapers lately have mentioned some remarkably good shooting by Mr. Hodgman. On a recent cold windy day he maintained throughout an average of more than 90 per cent., accomplishing the difficult feat of shattering 25 consecutive targets in the Walrode cup event.

HARDMAN RUBBER CO.—RECEIVER'S SALE.

On December 23 last Vice Chancellor Garrison made an order adjudging the Hardman Rubber Co. (Belleville, New Jersey) insolvent, and appointed William A. Smith, a counselor at law of Newark, New Jersey, receiver, and fixed his bond at \$25,000. The bill was filed by Pitney, Hardin & Skinner, representing James Hardman, Jr., the president of the company. The reason for filing the bill was to prevent numerous small creditors from obtaining judgments and liens. The appointment of Mr. Smith was made permanent on January 7, 1908, and he was directed to continue the business of the company so far as necessary to complete unfinished stock on hand. The nominal assets are stated in the bill at \$51,377.99, and the nominal liabilities about \$37,000. The receiver proposes to sell the machinery and equipment of the company by bids to be submitted on or before March 14.

The rubber business of which the Hardman Rubber Co. is the outgrowth has been conducted by Mr. Hardman for a great many years. This company was incorporated April 7, 1900. It was engaged principally in the manufacture of hard rubber goods—such as syringes, syringe pipes and atomizers. The plant of the Hardman company was destroyed by fire March 1, 1907. The company resumed business in the fall of 1907, having had a plant especially built for it. The cash realized from the insurance was spent in improvements, and when the company started it found itself short of working capital, and during the recent financial stringency it was unable to procure sufficient funds to carry on the plant. The machinery to be sold was purchased in the summer of 1907 and cost about \$25,000. There is also a large and valuable lot of molds and dies. The plant can be inspected daily between 9 and 12 A. M., and the receiver will supply a catalogue of the assets to be disposed of.

A RECLAIMING PLANT REMODELED.

WHILE a number of factories were closed down or were working on a short hour basis during the past two months, the employes of the Derby Rubber Co. (Shelton, Connecticut) have been working overtime. It was considered by the management the best opportunity for making important improvements to their plant, and they set to work to do this. The main source of power at the No. 1 mill—the two 300 hp. waterwheels—were overhauled. The vertical shafts and bearings needed adjustment after the 24 working-hour days of the season past. One line of mills was returned to the shops of the builders, even to the bed plates, for complete readjustment. They were all fitted with new style roll neck bearings, so constructed that the lubricant can be fed only through compression cups. It is expected that the new bearings will entirely eliminate the possibility of grease getting into the mill pans, where it would be liable to injure the stock. Incidentally there will be an economy in the matter of grease. Safety throw out clutches have been added to every mill where hand work is done on the rolls. A complete system of conveyors has been installed, and great care has been exercised to construct them in such a manner that the stock in process cannot accumulate any foreign substances in transit. Heavy iron floors have been put down wherever it is necessary to receive heaps of stock during manufacture. Improvements have been made in the arrangements for drying stock at different stages. The boiler room has received attention, also. One 16'x72" horizontal tubular boiler has been dispensed with, and all drips from the factory returned to a new steel hot well. Three pumps and an air compressor have been installed. With a strong belief that the cleanliness of the product depends largely on neatness of the operatives' surroundings, the management decided to paint the whole interior of the plant. So it is that the Derby Rubber Co.'s No. 1 mill has undergone a transformation which has placed them in the front rank of reclaimers as regards equipment.

The No. 2 mill has also received attention. The source of power in this mill is a 225 hp. A. C. motor, which is connected

to the main shaft by a rope drive. This mill is used for the fine washing and finishing of the higher grade stocks, and is also equipped with a vacuum dryer. One of the chief features of this mill is the well equipped laboratory where analytical and physical tests are made on reclaimed stocks, and where it is hoped some interesting research work will be done in the reclaiming field. The staff of the Derby Rubber Co. has been reorganized recently, and as they are all energetic and young men it is expected that they will achieve a liberal measure of success in their undertaking.

NEW YORK CITY BUYING FIRE HOSE.

The New York board of aldermen on February 18 voted \$200,000 for the purchase of hose for the city fire department, in addition to \$50,000 voted about two weeks earlier. The fire commissioner has advertised that bids for supplying hose as follows will be received at his office until March 3:

For the Borough of Manhattan: 30,000 feet 3-inch rubber fire hose, for high pressure system, 6 ply; 20,000 feet 3-inch rubber fire hose, 5 ply; 30,000 feet 2½-inch rubber fire hose, 4 ply.

For the Borough of Brooklyn: 10,000 feet 3-inch rubber fire hose, for high pressure system, 6 ply; 10,000 feet 2½-inch rubber fire hose, 4 ply.

The figures above—100,000 feet of hose called for by the city practically at one time—may make of interest, for purposes of comparison. The following figures compiled from a New York municipal document entitled: "Report by the Commissioners of Accounts to Mayor George B. McClellan Upon the Operations of the Fire Department at the Parker Building Fire, January 10, 1908." The table shows the amount of fire hose of all kinds received by the city from January 1, 1904, to January 27, 1908, the dates in the first column relating to the years in which the hose was bid for, rather than the dates of contract or of delivery:

Year of bidding.	Cost to City.	Length in feet.
1904	\$78,785.25	92,500
1905	74,000.00	79,500
1906	96,258.00	83,100
1907	—	—
Total, four years.....	\$249,043.25	255,100

MR. MINOTT VISITING CUBA.

THE Havana *Daily Post*, of February 10, says: "Frederick Shepard Minott, president of the Goodyear Rubber Insulating Co. and secretary of the Goodyear Rubber Co. of New York, is in Havana on a trip which combines business and pleasure. He is investigating the rubber and copper resources of Cuba and because of an interest in the Bell Telephone Co., is watching the contest for the Havana telephone franchise. Mr. Minott paid his first visit to Havana in 1893 and on that occasion brought the first automobile to this island for touring purposes. He and his car created a sensation on that occasion. He is accompanied by Mrs. Minott. They have planned a long tour through Central America and the Caribbean islands and expect to return to New York late in April."

TRADE NEWS NOTES.

MR. RUSSELL PARKER, of Parker, Stearns & Co. (New York), is the inventor of a tire protector, that is patented both in the United States and abroad.

MR. Frederic C. Hood, of the Shawmut Tire Co. (Boston), is the inventor and patentee of a quick removable tire and rim for automobiles.

The Empire Automobile Tire Co. (Trenton, New Jersey) have brought out a butt end inner tube for motorcycles, which they supply in either gray or red.

MR. Quincy Tucker, formerly with the Safety Insulated Wire and Cable Co. (New York), has become New England agent for a new periodical, *Tropical and Sub Tropical America*, of New York, with headquarters at Dorchester, Massachusetts.

PARA RECOVERY CO.—RECEIVER'S SALE.

THE receivership for the plant and business of the Pará Recovery Co. (Bayonne, New Jersey), mentioned in THE INDIA RUBBER WORLD January 1, 1908 (page 126), has been terminated by the sale of the entire property of the company, including patent rights and processes owned by it. The property was offered at public auction in Jersey City on February 11, including lands, buildings, furniture, and a considerable amount of rubber working machinery. The highest offer made was \$11,000, by William R. Elliott, of New York city, and the sale was made to him subject to confirmation by the chancery court of New Jersey, which was given on February 24. It is rumored, though this is not stated here as a fact, that the purchaser represents the interest in the Pará company, known to be considerable, of the National Rubber Co. (Austin, Texas), a guayule rubber concern. The Pará Recovery Co. was organized by Mr. George E. Heyl-Dia for the purpose of working guayule rubber under special processes.

TRADE NEWS NOTES.

A FIRE on February 18 did considerable damage to the factory at Bridgeport, Connecticut, of the Electric Cable Co. (New York).

The business of the late Dr. Peter T. Austen, a consulting chemist of New York widely known in the rubber trade, will be continued by Mr. Frederick J. Maywald, who has been associated with Dr. Austen and in charge of his laboratories for the past 14 years. Mr. Maywald is familiar with Dr. Austen's methods, and has had a widely varied experience in all lines of chemical work, all the cases which Dr. Austen undertook having passed through his hands.

THERMOID BRAKE LINING.

THERE has been for a long time a demand for a material for lining automobile brakes that would not burn, that would grip promptly, and last for a considerable length of time and not be affected by water or oil. After giving the matter considerable thought and doing considerable experimenting, the Trenton Rubber Manufacturing Co. (Trenton, New Jersey) have been successful in producing a material that accomplishes all of the above, and which they have chosen to call "Thermoid" brake lining. It is composed of rubber, asbestos, and brass. The rubber is of such compound that it resists to a very great degree excessive heat, and it is needless to say that the brass and the asbestos withstand the elements, especially when protected as in this case. This material is guaranteed not to burn and is being rapidly approved of by the automobile world.

SOME WANTS OF THE TRADE.

[442] A FOREIGN correspondent wishes to communicate with someone well acquainted with American rubber balloon manufacturers.

[443] Information has been requested regarding the process of Foelsing and Bögel for the extraction of rubber from various plants.

[444] "There is being sold in this vicinity an article known as 'Mendum,' designed to repair the uppers on rubbers. I judge this to be a form of gutta-percha. Can you tell me anything about it, and by whom made?"

Review of the Crude Rubber Market.

THE rubber market throughout the month has been dull and weak, declining during the greater part of this period, but showing a little more firmness at the end. Dealers report more inquiry for rubber than was heard a few weeks ago, but mostly at lower prices than the quotations given below. There has been enough snow, on the whole, to render the rubber footwear industry more active than at the beginning of the year, but there are reports from various parts of the country of mechanical goods factories working short time or with reduced forces.

It was supposed in some quarters that low prices would have the effect of causing rubber to be withheld from market up the Amazon, but statistics of arrivals do not support this view. Doubtless the owners of *Seringaes* are obliged, regardless of market conditions, to make shipments against obligations. Total receipts at Pará (including caucho) up to the date of latest advices were:

	1904-05.	1905-06.	1906-07.	1907-08.
July-January	17,890	20,400	18,500	19,100
February	4,320	3,920	5,600	43,804
Total, 8 months.....	22,210	24,320	23,500	22,904
[a—To February 19, 1908.]				

Following are the quotations of New York for Pará grades one year ago, one month ago, and February 28—the current date:

PARA.	Mar. 1, '07.	Feb. 1, '08.	Feb. 28.
Islands, fine, new.....	118@110	71@72	65@66
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	122@123	74@75	67@68
Upriver, fine, old.....	126@127	75@76	69@70
Islands, coarse, new.....	71@72	45@46	41@42
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	97@98	55@56	48@49
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet.....	77@78	50@51	43@44
Caucho (Peruvian), ball.....	95@96	55@56	49@50
Ceylon (Plantation), fine sheet..	137@138	89@90	75@76

AFRICAN.

Sierra Leone, 1st quality	61@62	Lopori ball, prime.....	62@63
Massai, red.....	61@62	Lopori strip, prime.....	55@56
Benguella	44@45	Madagascar, pinky.....	60@61
Accra flake.....	12@13	Ikelemba	none here
Cameroon ball.....	none here	Soudan niggers	53@54

CENTRALS.

Esmeralda, sausage....	50@51	Mexican, scrap.....	50@51
Guayaquil, strip.....	41@42	Mexican, slab.....	38@39
Nicaragua, scrap.....	49@50	Mangabeira, sheet....	42@43
Panama	40@41	Guayule	25@26

EAST INDIAN.

Assam	62@63	Borneo	26@27
Late Pará cables quote:			
Per Kilo.		Per Kilo.	
Islands, fine.....	3\$100	Upriver, fine.....	3\$800
Islands, coarse.....	1\$700	Upriver, coarse.....	2\$300
Latest Manãos advices:		Exchange	15 7/32d.

Upriver, fine.....	3\$700		
Upriver, coarse.....	1\$700	Exchange	15 3/16d.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—have been about as follows, though the market has hardly been active enough in some lines to create definite price levels:

Old rubber boots and shoes—domestic.....	6 1/2 @ 7
Old rubber boots and shoes—foreign.....	6 @ 6 1/2
Pneumatic bicycle tires.....	6 @ 6 1/2
Automobile tires	6 @ 6 1/2
Solid rubber wagon and carriage tires.....	7 @ 8
White trimmed rubber.....	10 1/2 @ 11
Heavy black rubber.....	4 1/4 @ 4 1/2
Air brake hose.....	4 1/4 @ 4 1/2
Fire and large hose.....	3 3/8 @ 3 3/4
Garden hose	2 @ 2 1/4
Matting	1 1/2 @ 1 5/8

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it does not blow under cure.

WRITE FOR PRICES.

Massachusetts Chemical Co.

WALPOLE, MASS.

Operates Walpole Rubber Works; Walpole Varnish Works.

NEW YORK RUBBER PRICES FOR JANUARY (NEW RUBBER).

	1908.	1907.	1906.
Upriver, fine.....	.74@.82	1.21@ 1.24	1.23@ 1.29
Upriver, coarse.....	.56@.65	.99@ .98	.94@ .97
Islands, fine.....	.71@.70	1.17@ 1.20	1.21@ 1.26
Islands, coarse.....	.45@.50	.71@ .73	.73@ .77
Cameta .....	.45@.50	.72@ .74	.74@ .78

In regard to the financial situation Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "During February there has been a fair demand for paper, mostly from out-of-town banks, as city banks are not buying generally yet, and ruling rates have been 6 to 7 per cent. for the general run of rubber paper. Although Wall street loans have been ruling low, both 'call' and 'time' buyers demand full rates on paper, and can readily supply their wants."

Statistics of Para (Excluding Caucho)

NEW YORK.		Total.		Total.	
	Fine and Medium.	Coarse.	1908.	1907.	1906.
Stocks, January 1.....	85 tons	29	114	176	122
Arrivals, January.....	813	347	1160	1590	1804
Aggregating	808	376	1274	1766	1926
Deliveries, January.....	815	340	1164	1638	1702
Stocks, January 31.....	83	27	110	128	224

PARA.		ENGLAND.			
	1908.	1907.	1906.	1908.	1907.
Stocks, January 1.....	248 tons	585	830	305	570
Arrivals, January.....	4045	3330	4720	1184	680
Aggregating	4293	3330	5305	2014	1045
Deliveries, January.....	3048	2365	3845	1104	700
Stocks, January 31.....	1245	965	1460	850	345

	1908.	1907.	1906.
World's visible supply, January 31... tons	4,060	2,587	4,002
Pará receipts, July 1 to January 31.....	16,945	16,730	18,310
Pará receipts of caucho, same dates.....	2,195	1,055	2,005
Afloat from Pará to United States, Jan. 31.	445	499	721
Afloat from Pará to Europe, January 31...	1,410	650	1,197

London.

AT THE LONDON AUCTIONS.

FEBRUARY 7.—Lewis & Peat report: "At auctions to-day about 28 tons Straits and 11½ tons Ceylon offered and mostly sold at and after the sales, at a decline of about a penny all round." Crepe, palish, 3s. 5¼d. @ 3s. 6¼d.; biscuits and sheets 3s. 6d. @ 3s. 6¾d.; one lot very fine pale, 3s. 7¾d. [= 88.7 cents]; scrap, 1s. 10d. @ 2s. 6¼d. Pará hard fine sold at 3s. 1¼d. @ 3s. 1½d., for February and March delivery.

PLANTATION RUBBER IN LONDON.

[Reported by Gow, Wilson & Stanton, Limited.]

	1906.	1907.
Number packages offered at auction.....	6,462	15,380
Quantity offered, in tons	348½	814
Quantity from Ceylon, in tons.....	98¼	192½

	1906.	1907.
Quantity from Malaya, in tons.....	250¼	621½
Number packages sold	4,130	7,388
Average price paid, per pound.....	5s. 6¼d.	4s. 9½d.

YIELD OF PLANTATIONS.

VALLAMBROSA Rubber Co., Limited.—For 10 months ending January 31, 1908, 185,329 pounds; same period one year ago, 120,678 pounds.

Seremban Estate Rubber Co., Limited.—During 1907, 109,360 pounds; during 1906, 62,258 pounds.

Pataling Rubber Estates Syndicate, Limited.—For 1907, 58,064 pounds; for 1906, 43,310 pounds.

Antwerp.

THE offerings at the regular monthly inscription, on February 27, amounted to about 444 tons, almost wholly of Congo sorts. Some lots, with the broker's estimations, were:

	1906.	1907.
34,926 kilos Upper Congo Aruwini.....	francs 6.20	
13,099 " Congo Lobay	8.00	
28,951 " Congo Kasai	7.20	
27,574 " Upper Congo, ordinary.....	7.75	
10,258 " Upper Congo, black.....	7.60	
11,201 " Upper Congo Mongala.....	5.00	
17,463 " Congo Kasai	6.70	
32,092 " Upper Congo Aruwini.....	6.90	
1,075 " Straits Settlements crepe.....	9.75	

[10 francs per kilo = 87½ cents per pound.]

RUBBER STATISTICS FOR JANUARY.

	1908.	1907.	1906.	1905.	1904.
DETAILS.					
Stocks, Jan. kilos	1,006,894	658,184	735,187	541,361	610,900
Arrivals in January...	547,068	317,602	605,029	325,081	522,259
Congo sorts	504,451	242,806	414,613	239,709	385,781
Other sorts	43,517	74,886	190,416	85,372	136,478
Aggregating	1,554,862	975,876	1,340,216	866,442	1,133,159
Sales in January.....	294,853	357,226	821,521	567,094	706,994
Stocks, January 31....	1,200,009	618,650	518,695	299,348	426,165
Arrivals since Jan. 1...	547,068	317,602	605,029	325,081	522,259
Congo sorts	504,451	242,806	414,613	239,709	385,781
Other sorts	43,517	74,886	190,416	85,372	136,478
Sales since Jan. 1....	294,853	357,226	821,521	567,094	706,994

RUBBER ARRIVALS AT ANTWERP.

JAN. 28.—By the *Bruxellesville*, from the Congo:

	(Générale Africaine) kilos	114,000
Bunge & Co.....		
Do	(Comité Katanga)	90,000
Do	(Société A. B. I. R.)	750
Do	(Comptoir Commercial Congolais)	4,500
Do	(Anversoise)	20,000
Société Coloniale Anversoise.....	(Sud Cameroen)	63,400
Do	(Lomami)	6,200
Do	(Cie. du Kasai)	2,500
Do	(Alamienne)	1,000
Société Générale de Commerce.....	(Société la Lobay)	30,400
G. & C. Kreglinger.....	(Baniembé)	3,300
M. S. Cols.....	(American Congo Co.)	4,700
Charles Detbier.....		1,250
		1,150

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

JANUARY 27.—By the steamer <i>Justin</i> , from Manáos and Pará:	IMPORTERS.		Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	304,400	65,100	96,200	29,500	546,600		
A. T. Morse & Co.	217,500	32,800	82,300	20,400	362,100		
Poel & Arnold.....	211,000	62,100	52,500	500	346,000		
General Rubber Co.	82,200	14,600	86,800		184,100		
Hagemeyer & Brunn.....	10,400		6,600		17,000		
L. Johnson & Co.	4,900		1,400		6,300		
Wm. E. Peck & Co.			5,300		5,300		
Total	835,400	174,600	331,100	126,300	1,467,400		

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life, low percentage of resin and is practically clean.**



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER
97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

FEBRUARY 4.—By the steamer *Obduse*, from Manáos and Pará:

New York Commercial Co.	233,700	32,500	51,900	56,000 = 374,100
A. T. Morse & Co.	57,000	0,700	9,500	66,700 = 149,800
C. P. dos Santos	79,600	12,000	37,400	129,000
General Rubber Co.	63,000	9,500	82,100	106 = 154,700
Poel & Arnold	60,000	43,400	42,500	9,200 = 155,100
Edmund Reeks & Co.	24,400	1,100	22,400	4,400 = 52,300
Wm. E. Peck & Co.			25,100	25,100
Hagemeyer & Bruhn	9,600		13,900	23,500
Charles Ahrenfeldt & Son	7,300		2,200	4,900 = 14,400
Total	535,500	105,200	287,000	141,300 = 1,660,000

FEBRUARY 17.—By the steamer *Marion*, from Manáos and Pará:

General Rubber Co.	157,100	27,000	111,200	295,300
A. T. Morse & Co.	157,700	35,600	15,000	10,800 = 219,100
New York Commercial Co.	134,000	22,500	42,200	10,300 = 209,000
Poel & Arnold	95,900	30,200	35,700	31,100 = 162,900
C. P. dos Santos	11,400	400	33,000	44,800
G. Amsinck & Co.	7,900	700	2,100	1,700
Haremyer & Bruhn	11,100			11,100
Crossman & Van Sicken	7,000	700	2,100	10,700
Edmund Reeks & Co.	5,400	700	4,100	10,500
Total	745,400	138,700	246,600	52,200 = 962,900

PARA RUBBER VIA EUROPE.

FEB. 3.—By the <i>Minneapolis</i> =London:	
General Rubber Co. (Coarse)	22,500
FEB. 8.—By the <i>Colon</i> =Mollendo:	
New York Commercial Co. (Fine)	2,500
FEB. 8.—By the <i>Lucania</i> =Liverpool:	
New York Commercial Co. (Fine)	10,000
FEB. 17.—By the <i>Etruria</i> =Liverpool:	
New York Commercial Co. (Coarse)	11,500
FEB. 8.—By the <i>Panama</i> =Mollendo:	
New York Commercial Co. (Fine)	2,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

JAN. 25.—By the <i>Venetia</i> =Colombian ports:	
G. Amsinck & Co.	5,500
Schulte & Goshen	3,000
Maitland Coppel & Co.	500
JAN. 27.—By the <i>Merida</i> =Frontera:	
Harburger & Stack	6,000
E. Steiger & Co.	500
Graham, Hunkley & Co.	1,000
JAN. 29.—By the <i>Prins Augustus Willem</i> =Colon:	
G. Amsinck & Co.	5,500
Eggers & Heinlein	1,500
American Trading Co.	1,500
A. Rosenthal Sons	1,500
Mecke & Co.	1,000
FEB. 3.—By the <i>Vigilancia</i> =Tampico:	
Continental-Mexican Rubber Co.	*55,000
Edward Maurer	*35,000
Poel & Arnold	*25,000
Remsche & Helde	*35,000
FEB. 4.—By the <i>Finance</i> =Colon:	
Piza, Nephews Co.	4,500
G. Amsinck & Co.	3,500
Demarest Bros. & Co.	3,000
A. Santos & Co.	1,000
Isaac Kubie & Co.	1,000
FEB. 4.—By the <i>El Sud</i> =Galveston:	
Continental-Mexican Rubber Co.	*75,000
Ed. Maurer	*50,000
FEB. 6.—By the <i>Croale</i> =New Orleans:	
A. T. Morse & Co.	11,000
Manhattan Rubber Mfg. Co.	2,500
Eggers & Heinlein	1,000
FEB. 6.—By the <i>Sigismund</i> =Colombia:	
G. Amsinck & Co.	4,500
A. Rosenthal Sons	2,000
De Lima & Cortessa	2,000
Roldan & Van Sicken	2,000
Cortez Commercial Co.	2,000
C. Thearn & Co.	2,000
Isaac Samuels Co.	1,000
J. A. Pauli & Co.	1,000
FEB. 8.—By the <i>Yumari</i> =Tampico:	
Ed. Maurer	*45,000
FEB. 8.—By the <i>Mexico</i> =Frontera, etc.:	
G. Amsinck & Co.	6,000
National Rubber Co.	4,000
H. Marquardt & Co.	2,500
Harburger & Stack	3,000
Graham, Hunkley & Co.	1,000
E. Steiger & Co.	1,000
FEB. 8.—By the <i>Calon</i> =Colon:	
G. Amsinck & Co.	10,000
Hirzel, Feltmann & Co.	4,000
A. Santos & Co.	1,500
Selva Bussensins Co.	1,000
R. G. Barthold	1,000
Andreas & Co.	1,000
FEB. 13.—By the <i>Matanzas</i> =Tampico:	
Ed. Maurer	*90,000
Continental-Mexican Rubber Co.	*55,000
Poel & Arnold	*22,500
FEB. 15.—By the <i>Advance</i> =Colon:	
Salina & Abdos	8,500
Hirzel, Feltmann & Co.	3,000
FEB. 15.—By the <i>El Alba</i> =Galveston:	
Continental-Mexican Rubber Co.	*55,000
FEB. 17.—By the <i>Monterey</i> =Frontera:	
Harburger & Stack	3,500
E. N. Tibbals Co.	2,500
H. Marquardt & Co.	2,000
Smithers & Nordenholt	1,000

FEB. 18.—By the *El Prado*=New Orleans:

A. T. Morse & Co.	6,500
FEB. 18.—By the <i>Panama</i> =Colon:	
A. Rosenthal Sons	7,000
W. K. Gough & Co.	3,000
Roldan & Van Sicken	2,000
Andreas & Co.	1,000
G. Amsinck & Co.	1,000
W. Loazni & Co.	1,000
FEB. 19.—By the <i>Prins Ethel</i> =Colombia:	
Schulte & Goshen	2,500
H. W. Peabody & Co.	2,500
Scanz & Co.	1,500
G. Amsinck & Co.	1,000
United Fruit Co.	1,500
And cas & Co.	1,000
D. A. De Lima & Co.	1,000
FEB. 20.—By the <i>El Norte</i> =Galveston:	
Ed. Maurer	*45,000
FEB. 21.—By the <i>Mimus</i> =New Orleans:	
G. Amsinck & Co.	12,000
Eggers & Heinlein	1,500

*This sign, in connection with imports of Centrals, denotes Guayule rubber.

AFRICANS.

JAN. 25.—By the <i>Waldersee</i> =Hamburg:	
George A. Alden & Co.	11,500
W. L. Gough Co.	3,000
JAN. 25.—By the <i>Lincoln</i> =Hamburg:	
George A. Alden & Co.	8,000
A. T. Morse & Co.	5,500
W. L. Gough Co.	2,000
JAN. 25.—By the <i>Amerika</i> =Hamburg:	
A. T. Morse & Co.	11,000
George A. Alden & Co.	9,000
W. L. Gough Co.	2,500
JAN. 27.—By the <i>Arabic</i> =Liverpool:	
Poel & Arnold	15,000
JAN. 27.—By the <i>Hersilia</i> =Lisbon:	
General Rubber Co.	33,500
JAN. 27.—By the <i>Campania</i> =Liverpool:	
General Rubber Co.	11,000
George A. Alden & Co.	10,000
JAN. 29.—By the <i>Meraba</i> =London:	
W. L. Gough Co.	11,500
JAN. 27.—By the <i>Georgic</i> =Liverpool:	
A. T. Morse & Co.	11,500
George A. Alden & Co.	11,500
Henry A. Gould Co.	5,000
JAN. 31.—By the <i>Celtic</i> =Liverpool:	
Poel & Arnold	16,000
George A. Alden & Co.	6,000
Livesey & Co.	4,500
A. T. Morse & Co.	3,000
FEB. 1.—By the <i>Pennsylvania</i> =Hamburg:	
A. T. Morse & Co.	11,500
George A. Alden & Co.	5,500
W. L. Gough Co.	3,500
FEB. 1.—By the <i>Lusitania</i> =Liverpool:	
General Rubber Co.	15,000
FEB. 3.—By the <i>La Sazoie</i> =Havre:	
George A. Alden & Co.	5,000
FEB. 6.—By the <i>Finland</i> =Antwerp:	
A. T. Morse & Co.	6,500
FEB. 8.—By the <i>Lucania</i> =Liverpool:	
General Rubber Co.	4,500
FEB. 11.—By the <i>Vaderland</i> =Antwerp:	
A. T. Morse & Co.	70,000
George A. Alden & Co.	15,000
Poel & Arnold	7,000
Rubber Trading Co.	3,500
W. L. Gough Co.	4,500
FEB. 13.—By the <i>Cervie</i> =Liverpool:	
General Rubber Co.	45,000
George A. Alden & Co.	11,500
Poel & Arnold	9,000
H. A. Gould Co.	4,500
FEB. 17.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co.	20,000
General Rubber Co.	33,000
Earle Brothers	3,500
FEB. 17.—By the <i>Bosnia</i> =Hamburg:	
George A. Alden & Co.	5,000
A. T. Morse & Co.	2,000

FEB. 18.—By the *Maya*=London:

A. T. Morse & Co.	4,500
FEB. 19.—By the <i>Samland</i> =Antwerp:	
Poel & Arnold	4,000
A. T. Morse & Co.	11,000
FEB. 20.—By the <i>Frances Irene</i> =Genoa:	
A. T. Morse & Co.	9,000

EAST INDIAN.

JAN. 27.—By the <i>Nordenfels</i> =Colombo:	
A. T. Morse & Co.	*13,500
JAN. 29.—By the <i>Mesaba</i> =London:	
General Rubber Co.	*7,000
Robinson & Stiles	*2,000
George A. Alden & Co.	*1,500
FEB. 3.—By the <i>Philadelphia</i> =London:	
A. T. Morse & Co.	9,000
Poel & Arnold	*2,500
FEB. 3.—By the <i>St. George</i> =Singapore:	
Heabler & Co.	15,000
W. L. Gough Co.	10,000
Poel & Arnold	3,500
FEB. 4.—By the <i>Minneapolis</i> =London:	
Earle Brothers	*4,500
Robinson & Stiles	4,500
George A. Alden & Co.	2,500
FEB. 11.—By the <i>Uderland</i> =Antwerp:	
George A. Alden & Co.	*5,000
FEB. 14.—By the <i>Athole</i> =Singapore:	
Heabler & Co.	25,000
Joseph Cantor	10,000
W. L. Gough Co.	10,000
George A. Alden & Co.	15,000
FEB. 17.—By the <i>Lichensfels</i> =Colombo:	
A. T. Morse & Co.	*8,000
FEB. 18.—By the <i>Massachusetts</i> =London:	
General Rubber Co.	20,000
Robinson & Stiles	4,500
George A. Alden & Co.	2,500
Robinson & Stiles	2,500

*Denotes Plantation Rubber.

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Liverpool.

EDMUND SCHLUTER & Co. report [January 31]:

Statistics as well as unfavorable trade conditions in America and the greater part of Europe do not yet satisfy the belief in an early improvement. The estimates of supplies from the Amazon during February are again large.

THE WORLD'S VISIBLE SUPPLY OF PARA, JANUARY 31.

	1908.	1907.	1906.	1905.	1904.	1903.
Tons.....	5611	3038	5268	3077	4249	3008
Prices, hard fine.....	3/1½	5/2	5/5	5/3	4/3¾	3/7

LIVERPOOL STOCKS OF AFRICAN RUBBER, JANUARY 31.

	1908	1907	1906	1905	1904	1903
1908.....	334	1905.....	340	1902.....	520	
1907.....	287	1904.....	294	1901.....	853	
1906.....	301	1903.....	432	1900.....	500	

WILLIAM WRIGHT & Co. report [February 1]:

Fine Para.—As anticipated in our last circular, the strained financial condition in the United States and the advent of heavy receipts have had their due effect, and prices dropped during the month fully 3d. per pound, but have since recovered somewhat, owing to easier financial conditions, both here and in America, a reduction in the export duty in Brazil, and in a slow but gradual improvement in consumption demand from American manufacturers. That the three months (from October to December) of consumption failure on the part of American manufacturers is not likely to be made up this season is an undoubted fact, but it must be borne in mind that the phenomenal drop in prices may affect next season's production; this is a possibility that has to be taken into account. It is freely stated that considerable quantities have been shipped over to Europe in consignments; this, generally speaking, would be an element of weakness, but under present conditions, with gradually improving American trade demand, a nominal bank rate, a phenomenal drop in prices, and a possibility of a reduced crop next season, these consignments if in strong hands can be easily carried into the next crop. While not anticipating any large advance we do think that the worst has been seen, and that consequently present prices are worth manufacturers' attention. There has been a large and active demand for delivery, but in an "in and out" market like that of the present month, the actual quantity sold is largely in excess of the actual amount of rubber to be delivered.

Rubber Receipts at Manacs.

DURING December and six months of the crop season (including cauchó), reported by Sociedade Anonyma Armazens Andersen:

	—DECEMBER—			—JULY-DECEMBER—		
FROM—	1907.	1906	1905.	1907.	1906.	1905.
Rio Purús.....	881	202	778	3887	2570	3302
Rio Jurua.....	664	477	593	1466	1415	1671
Rio Madeira.....	344	250	409	1707	1851	1758
Rio Solimões.....	456	445	406	2013	1674	1614
Rio Negro.....	110	156	104	139	216	154
From Iquitos.....	365	292	359	1245	1363	1406
Total.....	2820	1822	2669	10487	9089	9905

Rubber Statistics in Pounds.

POEL & ARNOLD (New York) have drawn up their statistics of exports of india-rubber from Pará and Manaus during 1907 in pounds, instead of kilograms, as appear in various other reports. The following figures are compiled from their summary:

EXPORTS.	To New York.	To Europe.	Total.
From Manaus and Pará. <i>pounds</i>	36,535,630	38,991,810	75,527,440
From Itacoatiara direct.....	4,275	254,313	258,588
From Iquitos direct.....	70,423	6,847,247	6,917,670
Total, 1907.....	36,610,328	46,093,370	82,703,698
Total, 1906.....	35,697,552	40,951,439	76,648,991
Total, 1905.....	33,642,955	41,130,215	74,773,170
Total, 1904.....	35,955,853	31,602,209	67,558,062
Total, 1903.....	33,142,621	35,409,284	68,551,905

PARA EXPORTS OF INDIA-RUBBER, JANUARY, 1908. (IN KILOGRAMS).

NEW YORK.					EUROPE.				
EXPORTERS.	Fine.	Medium.	Coarse.	Cauchó.	TOTAL.	Fine.	Medium.	Coarse.	Cauchó.
Schrader, Gruner & Co.....	23,057	7,185	73,169	.....	103,411	149,892	18,779	52,263	53,523
Ad. H. Alden.....	71,605	8,627	42,853	27,187	150,272	57,327	16,603	20,396	34,414
Scholz, Hartje & Co.....	65,802	7,207	17,097	.....	90,106	81,670	15,703	38,616	31,949
Gordon & Co.....	53,491	5,154	82,273	.....	140,888	55,047	11,251	9,261	12,733
R. Suarez & Co.....	.....	.....	.....	.....	.....	123,599	1,056	11,247	27,504
J. Marques & Co.....	14,234	3,012	14,520	749	32,515	25,330	3,000	24,000	.....
De Lagotellerie & Co.....	45,910	6,187	26,291	.....	78,397	170	.....	660	.....
R. O. Ahlers & Co.....	2,338	.....	601	.....	3,020	18,114	.....	2,608	31,318
E. Pinto Alves & Co.....	.....	.....	15,180	.....	15,180	4,420	.....	12,210	.....
Pires Teixeira & Co.....	9,520	.....	10,230	.....	19,750	6,970	.....	2,310	.....
Singlehurst, Brocklehurst & Co.....	.....	.....	.....	.....	.....	19,440	.....	3,571	2,823
R. A. Antunes & Co.....	.....	.....	.....	.....	.....	4,080	2,040	11,220	4,970
Sundry small shippers.....	.....	.....	.....	.....	.....	4,080	.....	5,280	.....
Itacoatiara direct.....	.....	.....	.....	.....	.....	15,212	1,846	8,681	5,357
Manaus direct.....	550,409	122,236	157,909	128,234	958,788	708,974	135,109	130,733	351,617
Iquitos direct.....	15,057	536	10,006	4,667	30,266	66,718	5,613	36,664	60,029
Total, January.....	851,402	160,204	450,219	160,837	1,622,662	1,341,043	211,060	378,900	616,237

2,547,240 4,169,902

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EDWARD J. MAYWALD, Consulting Chemist
100 St., Phone, 823 John. N. Y. City.

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Trade Mark stamped in
inside of coat,....



INDIA RUBBER WORLD

CAOUTCHOUC
HEVEA BRASILIENSIS
GUTTA-PERCHA
DICHOROSIS GUTTA

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APRIL 1, 1908.

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Golden and Crimson	VERMILION
RED OXIDE	ROSIN Chemically Treated
HYPO BLACK	SHELLAC
CHLORIDE OF SULPHUR	GILSONITE ASPHALTUM
GENUINE LITHARGE	HYDRO CARBON
Powdered and Flake	MINERAL RUBBER
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VEGETABLE BLACKS	COMPO BLACK
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BISULPHIDE CARBON	VARNISH MAKERS' SUPPLIES
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THE MANUFACTURERS SCORE.

THE rubber manufacturers in a very important branch of the industry have scored a point recently in connection with a disputed question that deserves more than passing notice, particularly because the decision that has been reached is right and just. The question of the standardization of rubber covered wires and cords for electric light and power circuits has received much attention at the hands of the National Board of Fire Underwriters and other associations to whose members it is of special importance that every possible safeguard should be established against losses by fire. The work that has been done by the central agency through which these various association coöperate, in regard both to establishing and maintaining a high standard in rubber covered wire production, has been mentioned at some length in the pages of this journal.

Of course no reputable firm, either of manufacturers or contractors, has had any desire for other than high standards of material and work, but so long as no definite standards were recognized, and in view of the keen competition at all times prevailing, it is undeniable that not a little wiring has been done that was far from creditable to the trade. The efforts which

crystallized in the formation of the Wire Inspection Bureau, and in its subsequent development have brought about an improved state of affairs, to attain which the insulated wire manufacturers have worked no less earnestly than the others in interest.

But questions arose of an inconvenient nature, resulting in a conference during the past month between a committee appointed by the several manufacturers of approved rubber covered wire and representatives of the fire underwriters and other bodies. The point in their discussion which is of special interest from our standpoint is thus stated in the official report:

On behalf of the manufacturers, it was declared that it would not be satisfactory to many or all of them to admit into their works inspectors exclusively under the employ of the Underwriters' Laboratories or any other organization in the management or control of which they had no voice.

On the other hand, the inspection service stated that it had no desire to force their system upon the manufacturers, and that they would go no further than to offer such service as the manufacturers might desire. The final decision was that "the manufacturers themselves can supervise the inspection and labeling of wire, and that their united indorsement of any system would answer every purpose."

It is understood that the Laboratories will continue to approve makes of wire that come up to certain requirements, and to make the fact public. But the manufacturer is to be left free to make his own goods in his own way—the only proper basis for the conduct of any industry.

THE COST OF AMAZON RUBBER.

NO question in connection with crude rubber is of more commanding interest to-day than the probable effect of a large production from plantations upon ultimate prices of staple rubber grades. Five years ago such a question would not have had respectful attention outside the then narrow circle of rubber planters. The rapid increase in the output of rubber plantations of late, however, has made a marked impression even in Stock Exchange circles in London, in which city the leading financial journals give relatively as much attention to rubber as to railway or mining interests.

It may be said, of course, that rubber planting commands so much attention because it is the newest marked success with which investing interests have been concerned. But it has been proved that rubber can be produced under cultivation with as much certainty as wheat or cotton, and the fact that the forest product in recent years has been sold to factories at as much as \$3,000 per ton, while steel has been produced at not above \$3.30 for the same weight, has rendered most alluring the possibility of cheapening the cost of production of rubber without wholly upsetting the long maintained price levels. In fact, it has been pos-

sible to draw a most spectacular picture of the near future of rubber planting profits.

But just as a thousand or so tons of cultivated rubber began to be produced, along with, say, 70,000 tons a year of the forest product, an unexampled drop in prices occurred, and investors in plantations naturally have been disturbed. The exact cause of the drop remains yet to be understood; up to date nobody seems to be able fully to understand what sent rubber up or down, or "where prices are made." At every meeting of a planters' association in Ceylon it is gravely stated that the lower prices to-day are due to something having happened in America.

But that is because the planters in Ceylon are British. Ten years ago, or five years ago, whenever crude rubber prices went up, London and Liverpool dealers told their customers it was because something had happened "in America." But all the while every American who cared a snap of his fingers about the situation blamed everything upon England or some other country, and at this moment the same thing is true—in every market it is said that rubber has gone up or down because of conditions somewhere else. And there you are.

The United States has not ceased to buy rubber. Look at these figures, showing the government statement of the quantity and value of rubber—total and average per pound—imported into the United States during ten calendar years past:

YEAR.	POUNDS.	VALUE	PER POUND.
1898	44,236,070	\$25,937,108	56 cents.
1899	54,408,495	34,219,019	63 cents.
1900	49,337,183	28,577,789	58 cents.
1901	55,152,810	28,120,218	51 cents.
1902	50,851,257	25,158,591	49 cents.
1903	55,744,120	35,152,642	63 cents.
1904	61,880,758	43,784,297	71 cents.
1905	64,147,701	48,517,006	76 cents.
1906	67,907,251	53,391,137	79 cents.
1907	68,625,647	49,797,437	73 cents.

New York is not, like some other rubber markets, an international clearing house for rubber; for the most part whatever supplies come into this port go promptly into the hands of home manufacturers. The recent decline in prices does not, therefore, depend alone upon conditions on this side the Atlantic any more than upon conditions on the other side, or in regions less discussed in this connection. It will be seen from the same table that prices have fluctuated, without regard to the volume of rubber imports (practically the volume of rubber consumption) into the United States.

But this article is not intended as an apology for, or a defense of, New York, and still less as an explanation of the influences which cause rubber to sell now higher and now lower. The immediate pressing question in Ceylon and other planting regions is: At what point of decline will the Amazon regions cease to export rubber, and thereby leave the prospective planting interest in command of the field?

Our opinion is that the Amazon river will carry rub-

ber to market for very many years after every rubber planter now alive has been gathered to his fathers. Nobody knows what it costs to produce *Hevea* rubber in South America, unless it be an exceptional owner of a *seringal* here and there who troubles himself to keep books. And the Brazilian who admits to himself that the sun rises or sets outside his country, or that *good* rubber can be produced elsewhere, is no patriot! Do not the cotton planters of the United States rest under the same delusion regarding their own special product? What is the use, they would say, of considering the possibility of competition, and planning how to meet it?

There are rubber manufacturers in the United States to-day who remember when fine "Pará" cost them only 25 cents [a shilling] a pound, and there never was any scarcity of raw material. Of course, with the growth of demand prices went up, which was natural, and the consumer did not complain. But it is impossible to fix a limit of price below which the Brazilians and their neighbors will not produce rubber. Whatever was true at an earlier date, most of the *seringueiros* of to-day have got to produce rubber, *or starve*. Their country as yet affords no other export staple—no other means of subsistence. The Ceylon planters whose enterprise fails can go "home," or somewhere else. But the Amazon rubber gatherer must gather rubber or die, and if the high prices of recent years which have amazed him and led him into extravagances and to feel that Amazonia had "the world in a sling" should disappear permanently, he would still gather rubber and manage to sustain life on the proceeds.

This is not written to discourage the rubber planter. The world will continue to use rubber more and more. The world as a whole is only on the threshold of using rubber as a general proposition. But it is idle as yet for a few bookkeepers to try to figure out what forest rubber "costs"—whether on the Amazon or on the Congo—and at what minimum of cost it will cease to be marketed. There are as shrewd business men on the Amazon as elsewhere, only they have not yet been forced to apply system to their accounting. When they are, the European shareholders in companies in the Far East must see to it that their directors are not worsted in the competition. Have we not seen millions of European capital invested in exploiting forest rubber in South America, and almost invariably at a loss? But the rubber output of the Amazon has gone on increasing year after year, and it is incredible that the people who have produced this great volume of exports have done so at a steady loss. So far the Brazilians as business men have not suffered by comparison with any competitors.

The real question is not, "At what low figures will Brazil stop producing rubber?" but "How cheaply can anybody else supply equally good rubber?"

THE VALUATION OF NEW RUBBERS.

WE have before us reports on three samples of rubber, from plants not known in the past as rubber producers, which have been appraised by a London rubber expert as worth respectively 1s. 6d., 2s. 4d., and 3s. 6d. per pound. The chemical analyses accompanying the estimates of values for these rubbers are understandable, and, having once been made by competent analysts, presumably will not have to be revised. But what is one to understand from the flat statement that a given specimen of rubber is worth 3s. 6d. a pound? All it means is that rubber of a given quality *ought* to bring such a price on the day of the appraisal, having reference to the market price of rubbers of known quality, such as the best Pará sorts.

At the date of this writing no grade of rubber, of any grade, is quoted in any market, other than in exceptional cases, at anything near 3s. 6d. [=85½ cents]. So far as we can make out from the reports on the new grades of rubber to which we have reference particularly, the idea of the appraiser is that, on the date of the report, the best of the samples was worth approximately 65 per cent. of the price quoted for the moment for fine hard Pará from South America. Then why not say so, without troubling to specify a precise market value for the new rubber? Dealing with the matter in this way, if the rubber chosen as a standard in the way of values is fine hard Pará worth \$1, the new rubber might be worth 65 cents; if Pará is worth only 65 cents, the new rubber may be quoted at 42¼ cents, and so on.

It happens that these reports by experts do not always soon become public property; in the case under review two years have elapsed since the samples of rubber had expert attention. We mention the matter here only to illustrate the lack of value of so many estimates of new rubbers. Manifestly it would be absurd to speak of a hitherto unknown rubber, and one as yet untested in factory practice, as having a specific value—say 3s. 6d.—at a time when no rubber in the market, no matter how well known or how important to the industry, brings any thing like so much.

What we would suggest is that the comparatively few experts in the field of appraising rubbers should come to an agreement as to a standard for valuations of crude rubber—say fine hard Pará—and that all estimates of the new sorts should be expressed in percentages, having reference to relative qualities. Then, in order to make the estimates of practical value, it would be necessary only to learn what the standard grade was bringing from day to day; whoever was interested could thus easily figure out what might be reasonable to expect as a price for the new sort.

Of course it must be understood that no new rubber "finds itself" in the market at once, but it counts for something if one is interested in exploiting rubber from *Cryptostegia grandiflora*, for example, and he can feel as-

sured that it compares thus and so with the produce of *Hevea Brasiliensis*. A rubber about so good is bound to find a market in time, if it can be produced in fairly uniform quality and in amounts worth considering.

RUBBER GATHERING AS A SPREE.

A WELL known English traveler and writer, Mr. A. H. Savage-Landor, has brought out a new book of African travel, some extracts from which, relating to the Congo Free State, have been compiled in a pamphlet, evidently under the inspiration of the king-sovereign of that very interesting country, as an apology for his much criticized administration. Some references to rubber in this pamphlet may be worth noticing here. The noted traveler writes:

I well remember Captain Bibolini sitting at his desk, with a pleasant smile always upon his lips, marking carefully each basket of rubber brought into the post by natives.

From what is to be read farther on it is apparent that all the smiling was done on Captain Bibolini's side of the desk, though why he smiled is not mentioned. The next detail relates to how trading is done with the natives:

Each man's name was registered, so that no mistake could occur, and payment in goods was at once handed over. Money was useless, and the natives would not accept it.

Whether anything else pleased the natives is not mentioned specifically, but we do learn from Mr. Savage-Landor that they do not smile while at the trading post. He says:

Hundreds of men sat down upon the ground with legs spread wide apart and crossed arms resting upon their knees. Their faces were expressionless and stupid, with a hint of cruelty in the vicious eyes.

What are they mad about? Was it that grown men are kept at play? Read next about their enforced idleness:

Each man had a basket of rubber before him. Every man, in the richer regions, must bring in three kiles (six pounds) of rubber a year—the only tax imposed upon them. This only means a few days' work a year for them—a work which requires no effort whatever.

Still it is a puzzle why all these hundreds of men with legs spread wide apart should look cruelly out of their vicious eyes. Is not life one grand sweet song for them? Read:

As they generally go *en masse* upon their rubber-collecting expeditions, they carry their entire families with them and look upon the whole thing as a great spree.

Here may be a hint. Gathering rubber may be a glorious "spree," but what a difference in the morning, when it is all over and they sit on the ground, looking at the smiling Captain Bibolini on the other side of the desk! Why weren't they allowed to continue spreeing?

There is space here for only one more extract:

Rubber has locally no value whatever among natives themselves. They have not yet risen to pneumatic motor-wheels nor to mackintoshes, galoshes, or rubber-soled tennis shoes. No use worth referring to is made by them of this valuable latex.

All of which might suggest to some people that the Congolese natives have not yet assimilated to the utmost the lessons of civilization which it has been the boasted pleasure of the royal philanthropist at Brussels to force upon them.

WE HAVE BEEN ASKED TO DISCUSS the question of amending the United States tariff laws as a step in increasing trade between the mainland and the Philippine islands. Not being in a position to legislate on the subject, we prefer to leave such discussion to those who are. We trust that commerce between the States and the islands may long continue to grow, but THE INDIA RUBBER WORLD has never been a believer in depending upon changes in the statute books as a means of building up trade. We do not depend upon congress to make trade for us at home; why should we abroad?

GUAYULE RUBBER NEWS.

IT is reported that a large guayule rubber factory is to be erected by the Big Bend Manufacturing Co., of San Antonio, Texas, at Alpine, Brewster county, in that state, on the line of the Southern Pacific railroad. The company referred to was incorporated under the laws of Delaware last year, for the purpose of contracting to exploit the guayule rubber on the school lands in Texas, under an act of the legislature which became effective on July 11, 1907. Bids for the privilege were opened on September 5, and the contract was awarded to the Big Bend company, of which James D. Crenshaw, a lawyer of San Antonio, Texas, is president. It was very definitely set forth in the act of the Texas legislature under which the school land guayule contract was awarded that the contractor should not be "a party to or a member of any trust, monopoly, or combination in restraint of trade." It is not on record, by the way, that the state of Texas has any guarantee that the Big Bend company is not hand in glove with the most pernicious of all "rubber trusts."

* * *

THE location of the new Texas factory is to be not far from Marathon, in the same county, where is the factory of the Texas Rubber Co., headed by Otto Koehler, of San Antonio, Texas, who is also president of the National Rubber Co., operating a guayule factory in Mexico. Mr. Koehler, by the way, has been referred to already as interested to an important extent in the Pará Recovery Co., whose plant at Bayonne, New Jersey, was reported in the last issue of this journal as having undergone a change of control.

* * *

THE Torreon *Enterprise* reports: "The force of men employed at the plant of the Continental-Mexican Rubber Co. has been increased and they are again running to full capacity both day and night. The force they are employing is again normal. Some time ago the company cut down its output and laid off a number of men. It was, however, given out at the time that the decrease was temporary, and due greatly to the fall in the price of crude rubber."

* * *

ADOLPH MEYER, who for some time has been at the head of the department for the purchase of guayule shrubs for the Continental-Mexican Rubber Co., whose plant is located at Torreon, has been made manager of the company's hacienda Cedros. This is the largest guayule property in the world, and the hacienda is devoted entirely to the production of guayule. Several botanists of note are employed there in growing the guayule plant from seeds and in transplanting the seedlings, and the general control of this experimental work will be turned over to Mr. Meyer.

* * *

F. EPHRAIM, formerly of San Francisco, California, and now of Torreon, Mexico, has filed charges against William Maganeu, as manager of the National Rubber Co., and others connected with that company, alleging infringement of patents granted to Ephraim covering processes for the utilization of guayule rubber.

A BRITISH VIEW OF SYNTHETIC RUBBER.

[FROM "THE FINANCIER," LONDON.]

TOUCHING the subject of synthetic rubber, we are still receiving letters from correspondents asking our opinion of this bugbear. Regular readers of *The Financier* cannot fail to be fully acquainted with our views on the subject, and it was hoped that we had disposed of the question—if not finally, at least for a considerable time to come—in our issue of January 24, in which we reproduced an article from THE INDIA RUBBER WORLD, which admirably summed up the whole question. That correspondent who asks our opinion of a synthetic rubber company, recently registered, with a capital of £100,000, of which 650

shares of £10 each have been issued, to carry on experiments, we can only refer to this article. It is quite possible that he might with greater profit put money into a scheme for extracting rubber from the earth, such as is indicated in the following story, culled from a Washington local paper, and reprinted in THE INDIA RUBBER WORLD. [The article last referred to appeared in the February issue of this journal—page 161.]

HODGMAN HYDEGRADE CRAVENETTES.

PROBABLY no other fabrics in the United States are as well known as the "Hydegrade," and no rainproofing process anywhere near reaches in reputation the Cravenette process, and furthermore, no manufacturer of waterproof clothing has a name that is more widely known than that of Hodgman. It is, therefore, of more than passing interest to know that A. G. Hyde & Sons, proprietors of the Hydegrade fabrics, have formed a close working alliance with the Summit Proofing Co., sole

licensees in America for the Cravenette waterproofing process, the arrangement being that the latter company shall treat the Hydegrade fabrics with the Cravenette process to the exclusion of all other domestic cotton cloths resembling them. In addition to this, the Hodgman Rubber Co. (New York) have in turn formed a close working alliance with A. G. Hyde & Sons whereby they are to have the sole output of the Cravenetted Hydegrade fabrics, and are already putting on the market a wonderfully attractive line of spring de-



signs. The finish and sheen of these goods is equal to that of the best silk garments, while the wearing quality is superior. The goods cover new zephyr weights for men, women, misses, and children, made in the fashionable French *militaire* models, new motor coat models, semi fitting backs, English box backs, with cuffs, lapels, and pipings of contrasting colors. These garments are all tailor made, are exceptionally smart, in addition to being *rainproof*, dust proof and spot proof. They retail for from \$5 to \$10, and with the three warrants of quality—Hodgman, Hydegrade and Cravenette—on the label, are sure to find a ready welcome in the American market.

WITH regard to the projected international rubber exhibition, a prominent rubber manufacturer in England writes THE INDIA RUBBER WORLD: "As far as I can see it is more a question of exhibiting plantation rubber than the manufactured article, but I am not in a position to give you quite accurate information on this point, having heard very little of the proposed exhibition." In other words the world at large are interested only in seeing absolutely new developments in rubber in exhibitions, which is exactly the position that THE INDIA RUBBER WORLD took in the March issue.

ALTHOUGH the state of New Jersey values her roads so highly that she refuses to allow automobilists to use chains for the prevention of skidding, her present executive, Governor Fort, is sounding the right note when he proposes a general tire tax for all vehicles. He holds that it is unjust that automobilists should pay so large a proportion of the road tax; that all vehicles using the roads should be taxed, the amount depending upon the width and type of the tire. A law of this sort is needed everywhere and would very soon result in vastly better roads.

Rubber Gathering in Bolivia.

THE growing interest in the exploitation of Bolivia, and especially of india-rubber, which at present is one of the principal export staples in that country, suggests the presentation at this time of some views which appear on this and the following page. To-day a considerable portion of the rubber gathered in Bolivia finds its way through a mountain pass near the town of Sorata, to the Pacific port of Mollendo. The project-

the Andes, not far from Lake Titicaca, from the western coast of which a railway runs to Mollendo, on the Pacific coast. Sorata is on the line of the commercial route to northwestern Bolivia, and is a progressive and enterprising town in which living expenses are relatively cheap. It is a center for the contracting of laborers for the gathering of rubber, bark, coffee, etc., and for the distribution of provisions and merchandise to the inhabitants of

the neighboring valleys. The town is distant from four to ten days, by mule or pack animal, from the rubber districts which, in portions of Larecaja province, are among the richest, in *Hevea* rubber, in the world.

A report on this region in the *Monthly Bulletin* of the International Bureau of the American Republic (Washington, February, 1908) says: "The number of rubber trees varies greatly in the different rubber producing centers. In some regions as many as 100 trees are found to the hectare (=2.471 acres), while in other places it is difficult to encounter a dozen rubber trees to the hectare. The largest number of the *Hevea Brasiliensis* grows on the slopes of the mountain ranges that receive the direct rays of the sun." The report indicates that various other rubber species exist in this region, but that only the *Hevea* has been



TAPPING A TREE.

[Use of the "machadine," preparatory to attaching a "tichuela" to catch the latex.]



CURING THE RUBBER.

[At the "humedero." Smoking the latex in a wooden paddle over a palm wood fire.]

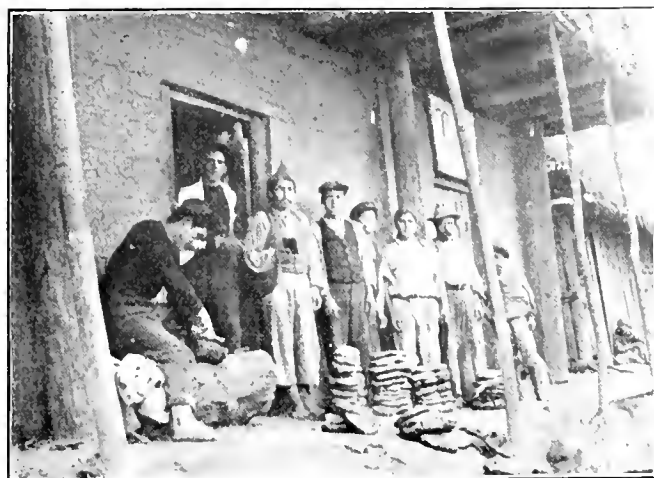
ed railway around the falls of the Madeira, in order to facilitate access to the Amazon, and in which American capitalists are deeply interested, may change this situation—but that is for the future. The pictures shown here record existing conditions.

Sorata, a town of about 2,000 inhabitants, is the capital of the province of Larecaja, in the department of La Paz, in the west of Bolivia. It is situated at the foot of one of the highest peaks of

exploited, owing to the others being less valuable.

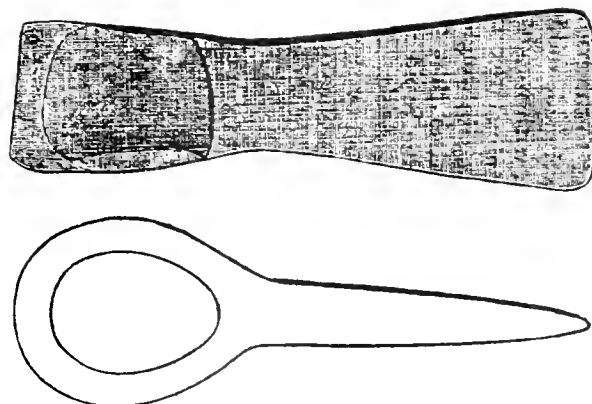
TAPPING FOREST RUBBER IN BOLIVIA.

MR. F. J. DUNLEAVY contributes to the *Tropical Agriculturist* a report of some observations made by him on the yield of *Hevea* rubber trees on the property of the Boston and Bolivia Rubber Co. He started out with an expert tapper at 5 A. M., and their work was done at 10 A. M. Meanwhile the man had tapped with a machidine 345 trees, attaching to them 946 tichuelas (cups).



AT THE COMPANY'S STOREHOUSE.

[Cutting the cured rubber from the wooden paddles.]



THE TAPPING TOOL USED IN BOLIVIA.

[The first view shows the full size of the "machadine." The second shows an outline, with the eye for a handle 2 feet long.]

He had placed 1 each on 30 trees; 2 on 103 trees; 3 on 128 trees; 4 on 70 trees; and 5 on 8 trees. Mr. Dunleavy measured the trees as the tapping progressed, showing them to average 16 inches in diameter. At 10 o'clock the tapper returned to the starting point, and went over the route again with a *balde* (empty pail) to collect the latex, which weighed, when brought into camp, 10 pounds. The latex was rapidly cured on a wooden paddle in the smoke of chiri palm wood, forming one *bolacha* of rubber which weighed, immediately after the curing was completed, just 10 pounds—the same as the latex. Sixteen hours



F. J. DUNLEAVY.

[Manager Boston and Bolivia Rubber Co., Sorata, Bolivia.]

later the *bolacha* had lost $5\frac{1}{2}$ pounds in weight, and twenty days later $3\frac{1}{2}$ pounds more, leaving 10 pounds of dry rubber. Mr. Dunleavy remarks: "This would illustrate to my mind that rapid coagulation is a mistake, and that each coating of latex added to the coagulated *bolacha* of rubber should be properly browned with the smoke, instead of making it only sufficiently solid to prevent dripping from the paddle. This extra smoking would

improve the keeping qualities of the rubber and increase the price of the same."

A STORY OF BOLIVIAN TRAVEL.

MR. QUINCY TUCKER, sometime of the rubber trade in New York and Boston, is the author of a series of articles now running in the *Boot and Shoe Recorder* on "Seeking Rubber in Bolivia, and Other Elastic Experiences." Mr. Tucker visited the Bolivian rubber fields with a party who based their hopes for success there upon indications supplied by a gentleman calling himself Baron Henri Arnous de Rivière. The fact that these hopes were not realized does not make Mr. Tucker's narratives any the less interesting. This, by the way, was not Baron de

Rivière's first personally conducted expedition from North America to Bolivia. It is now 15 years since the Beni Gum Co. was formed in New York through his activity, and in an attempt to develop which the late Joseph P. Earle, then an important factor in the crude rubber trade, made a journey to the Beni region, to which he was not wont thereafter to refer with much satisfaction.

RUBBER GATHERING IN PERU.

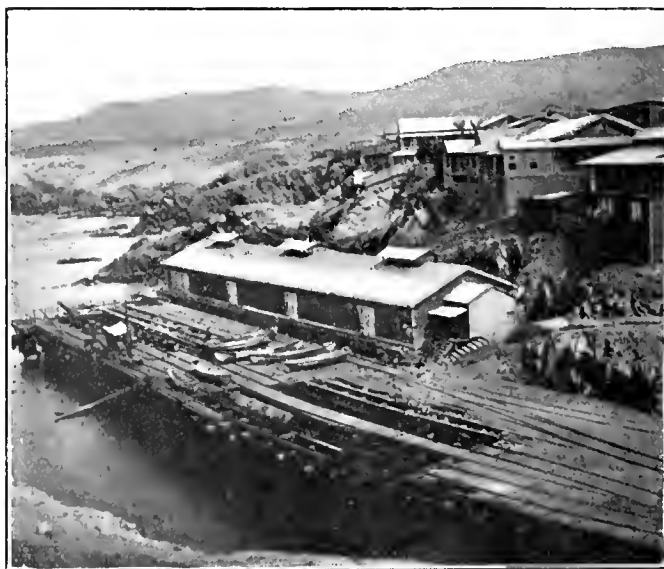
THE rubber industry in the regions of Peru drained by the upper Amazon is treated in some detail in an official report by the United States consul at Iquitos, Mr. Charles C. Eberhardt, who states that he has recently visited one of the rubber regions and assisted a body of rubber gatherers in their work. He mentions the tapping of trees from about 6 inches in diameter to 24 inches, carrying respectively from 3 to 9 tin cups. An *cstrada* of about 150 trees was tapped early one day and visited later by a man carrying a can of about $2\frac{1}{2}$ gallons' capacity, into which the cups were emptied, some of them containing less than a tablespoonful of latex. The result of the day's work was about 2 gallons of latex, which, when smoked over a round stick, formed a hard white substance (which later turned black) of about $4\frac{1}{2}$ pounds of the best grade of rubber—"jebe fino." The consul mentions that a new series of wounds is commenced every month at a point as high as the workman can conveniently reach, each subsequent wound being made a little below and in the same vein, till the bottom of the tree is reached at the end of the month. When a tree has been overworked and the milk does not flow freely, a scaffolding is constructed about the tree, which the worker mounts and inflicts the wounds farther up along the trunk. This practice, however, is very injurious to the tree, if not absolutely fatal in the end, and is forbidden on the tracts which the consul visited. Mr. Eberhardt insists that, despite all reports to the contrary, the number of productive rubber trees in the regions which he has visited is steadily growing less.

THE annual inspection of plantation "Capoacan," of the Ohio Rubber Culture Co. (Canton, Ohio), was made this year by Mr. Charles S. Eddy, connected with The B. F. Goodrich Co. The inspection seems to have been careful and painstaking, and goes into detail in regard to the extent of the planting of rubber to date and the condition of the trees planted in each year, beginning with 1905. On the whole, the report is likely to prove satisfactory and encouraging to the investors in the property.



VIEW OF SORATA, BOLIVIA.

[Headquarters of the Boston and Bolivia Rubber Co.]



VIEW OF MOLLENDO, ON THE PACIFIC.

[A Peruvian port through which the Rubber sent from Sorata, Bolivia, finds its way to market.]

Handling of Mechanical Goods Claims—I.

By Alexander Macpherson.

EVERY manufacturer would like, entirely to cut out claims made by customers on account of unsatisfactory service, and many can be cut out if the goods are properly made and then properly sold. If intending to put a new line on the market, look into the uses and the service expected. Get out and see an engine and separator at work on the prairie if you want to tackle thresher belts. Don't give a day to it; take a week or more. After a week of interesting research you may decide to cut out all claims by cutting out the belts. But if you can stand seeing the poor old belts misused at the hands of inexperienced men and think that you can make something that will give them a hard time to destroy, perhaps you will have learned that the belts run at a high speed over one large and one small pulley, that the engine is often cut of line on a windy day, and that sometimes the poor old duck and rubber thing is expected to act as a logging chain whereby the traction engine is to pull the separator into place. You may come back prepared to make the best thresher belt on earth, but I think that you will also conclude that you will have some claims to look into, in any event, and some to adjust at a loss if you do not sell your goods properly. And so it is with all other conditions you intend manufacturing for. If you are to make good injector hose for use between locomotive and tender, there is no use putting in a water hose lining when you know that the engineer runs his excess steam through the hose, to economize fuel by bringing his water supply up to a high temperature. See how the hose is attached. See what is expected of it and plan to give an article that, when properly used, will give fair service.

Sell goods properly. Have your trouble when selling and reduce your claims. Be careful when making your contract. Get the bargain into plain English, expressing clearly what you undertake to do. I have no use for the expression "We guarantee satisfaction." No manufacturer can undertake to suit all his customers all the time. What he can do by studying the conditions and knowing how to manufacture for them is to give fair value for the money. But what if a man orders an 8 inch 8 ply belt when he should have had a 14 inch 6 ply? Can you suit him? Perhaps the belt may do, but ten to one it will not, and then "You guarantee satisfaction" says the user. Cut out the word "guarantee," or, if a guarantee is necessary, have it specific—a certain friction test, a certain bursting pressure, or a specified tensile strength. You are not an expert engineer, but a rubber manufacturer making goods to certain standards which your customer or his engineer specifies. Help your customer all you can and point out in a judicious way that if you were buying the goods you might change the specification and expect better results, and then let him use his own judgment. If it looks dangerous to you, go on record by letter. Then, if he has trouble, your skirts are clear. Don't drive him away. Give thought to your letter and if the claim comes you can say "I told you so," and prove it, too.

There may be 2 inch 8 ply steam hose that will stand 125 pounds steam pressure indefinitely. If so, I do not know it. In the natural course of events the temperature generated by 125 pounds steam will, in a properly made hose, first char the cotton duck, perhaps the charred duck will give way, and the still soft rubber follow it, but if the hose holds, the heat will eventually char the rubber tube and the steam will find its way through. If your customer orders 1,000 feet 2 inch 8 ply steam hose mar-line wound to stand 125 pounds steam pressure, tell him how matters stand and let him confirm his order with a clear understanding of conditions. He may want the goods in a rush. It is well to ship promptly, but you are in it not only to please but to make money, and it is not a money making plan to please

by making prompt shipments when you run the risk of having to pay for being obliging at the expense of returned used goods.

Drop the word "guarantee" and reduce the claims. Sell goods on their merits. Undertake that they will be reasonably free from defects in construction. State, if you like, that they will be of a quality at least equal to the material usually entering into goods sold under a certain brand, but do not undertake that they will be perfect in material.

I leave these thoughts about studying the uses of the goods and the proper selling of the goods, and pass on to the handling of the claims made by customers, be these claims real, supposed, or trumped up. Each claim has peculiar features, all worth study. Some look tough at first, some remain tough and difficult to adjust fairly without losing money or a good customer. But when I know I am right and have to plan to convince my man that he is wrong, I look with considerable zest to seeing some of the big ones come in for next season's purchases, details specified and shipping dates given.

Do not imagine that because I am dealing with claims for returned used goods that I have been making or distributing inferior goods. There may be somewhere in the realms of possibility a manufacturer who has never experienced a claim. If so, I would like to look him over. All have claims made upon them sooner or later, let them be just or unjust. The man that has the fewest justifiable claims is the one best off. But how are we to adjust all these with justice to both parties and keep the peace? All I can do is to use the share of brains, judgment and tact with which I have been endowed, or have acquired, and reduce my operations to a system.

Now the farther on a claim gets, the harder it is to adjust. The traveling man that can pass up a supposed claim in a happy way is your right hand man. He nips it in the bud with a delicate but firm pressure that even his sales manager may appreciate, because he does not know what the traveler has done for him. But some time this jewel of a traveler does not get a chance at it. Some day a letter comes from a customer stating that a piece of hose, belting or something else has gone wrong. And here I want to say that I am of the opinion that the sales manager, the one who is responsible for the distribution of the factory output, should be the man to pass finally on all claims. Well, the claim is made. I have been in the habit of classifying all claims under one of three headings:

1. Just claims.
2. Claims made in good faith by the customer but which you are sure are not just.
3. Unjust claims—those that you are convinced are made by the customer when he knows that the goods have not had fair treatment.

Now how shall we dispose of these? In the abstract—

1. If you are wrong, make it right and make it right quickly.
2. If you are right, it is up to you to convince your man that his claim should be withdrawn.
3. Take a firm stand and if the claim is not withdrawn, close the account and notify the traveler not to call on the firm.

In elaboration of these headings, I will first explain the system, and later the methods of handling the system. Don't burden yourself with the details. Get an assistant accustomed to your style of letter and system and turn the details over to him. Keep him up to the mark, but reserve your time for the fine work.

The bookkeeping staff may have accounts which will show the final disposition of the claims made, and I think it is well to have accounts under the headings of "Defective Goods" (chargeable to factory) and "Policy" (chargeable to selling department). But accounts or no accounts, keep a book which will give you the

history of the settlement of each claim. Rule a Claims Record, with headings for (1) Claim No., (2) date, (3) name, (4) address, (5) goods, (6) value, (7) adjustment—whether “not allowed,” “defective goods account,” or “policy account”—and (8) general remarks. In practice I have found it advisable to have two files, one called “Active Claims File” and the other “Inactive Claims File,” to hold all papers pertaining to claim until individual claims are settled. All claims made are active until you have completed your share of the work. Then they either disappear from the Active Claims File or become inactive. If finally settled, remove all papers for distribution. If you have done your work and a lull ensues without the claim being withdrawn, and if there is no account open in the ledger due to the claim, then put it on the Inactive File. Your man may be convinced, but may not admit it and you may never have another kick from him. Inactive things do not kick. When you are sure that they are dead, bury their parts in the general files.

To return to the letter that embodies the claim. On the face of it you may detect that the claim is groundless. Your man may state that the 1 inch 4 ply steam hose sold him did not stand over six months subjected to 125 pounds steam pressure. Or he may complain that the belt sent him has frayed on one edge. Either of these should be easy to handle, especially if your catalogue is in good form. But enter it up in your book with value of goods, if obtainable. It is a claim. If you do not stifle it quickly it might mean a loss to you. It is not allowed, so much saved.

But if it looks reasonable and is not out of the ordinary put it into your assistants' basket. He knows it is to be acknowledged by a form of letter that promises attention, nothing more, when the goods come in charges prepaid. He knows that the traveler or branch interested is to receive copies of all correspondence. He knows that the receiving clerk is to be notified that you want to have the original order on the Claims file, that the bookkeeping department and, in some cases, the order department, should know of it. He writes a letter to one, sends a copy to another, gets an initial here or telephones there. He finds whether a traveler is near your man and consults with you as to the advisability of wiring to him to report on conditions if he cannot adjust without an allowance. On to the Active Claims File goes everything and then he tackles something else.

You note to the traveler: “Adjust without an allowance.” My rule is if an allowance is to be made the goods in full of the allowance must come in. Do not permit a branch manager or traveler to make allowances on claims. These are rules and like all rules are subject to being deviated from. Perhaps some trifling allowance will adjust a claim amicably. “Bang!” goes rule No. 1 and it pays in time and money to let it go bang. You may find that a branch manager or traveler has been settling two or three claims in a nice way without allowances. “Bang!” goes rule No. 2. “Use your own judgment next time, Mr. Branch Manager, or Mr. Traveler. You have been doing fine work. You should best know how to settle these unjust claims, because you know your man.” But does it pay? You get a claim, you pass it on to your newly found star: “Settle it up.” Back comes the fatal letter: “I allowed him for one-half of the full roll. He is returning 50 feet to show how the rest gave out.”

I sent a traveler once to adjust a claim with a customer who had written in. He went, he saw, and he fell down. He thought he had done well, and so it should have been, but he had not all his facts. He should have had them, for he had memoranda of all orders from his man and all the correspondence. He saw hose gone wrong, 4½ inch hose. He reported in favor of giving two new lengths in full of claim for six; perhaps he promised this adjustment. At all events, his man stated as much by letter. And what were the facts? The hose was ours, made to special order, confirmed and reconfirmed as it looked irregular, bought by a railway, but the complainant was a neighboring contractor. The contractor never bought a foot of such material from us. If he

bought it from the railway, he used it for purposes for which it was never intended. But could I convince him after our man had, in his estimation, passed his claim? No. “Give me my two lengths.” “But if you did not receive what you ordered, why did you not return it? The difference is quite perceptible.” “Give me the two lengths Jones promised.” And he got them. He was honest, good pay, and bought freely. He was honestly off in this claim, but could not be convinced. Jones lost me those two lengths and it hurt. But drop it; it is over. It does not pay to punch holes through rule No. 2.

Then the goods come in. The receiving clerk receives the goods, reports length, width, diameter, or any other sizes with weight, brand, etc., using a set form with returnable, perforated instructions ticket attached. This form is in triplicate, one to be passed on to the factory superintendent with the goods, a second to be sent to the sales manager, and the third to be retained by him for his records. He is through until he receives his instructions ticket, when he removes his claims ticket from his current files.

It is then up to the superintendent. Join the superintendent yourself when he looks over a claim. Give him your points and get his points. Bear in mind that you are to be the judge between customer and factory. You have the customer's side of the case, now get that of the factory. The superintendent may report: “Hose does not leak; cover loose in places; not defective.” See the length. Accept his leakage test. You find the cover is detached from the fabric. It indicates that it never was properly attached. Defective, of course. Charge to defective goods account. Simple enough; this is a minor case. Your assistant has seen similar letters dictated by you and this is how he goes about it. He writes the customer, telling him that under test the hose does not leak.

However, we note that the service has brought to light a minor defect in construction, not perceivable even under your rigid inspection, and which might not have developed once in ten times. Of course, you are in the wrong and you are quite willing to endeavor to adjust. Your idea is that as the hose had evidently been in use some time his customer would not care to have such service without paying for it, so you would be glad to send a new length, charging at the rate of say 25 per cent. of the original charge. Your factory is wrong; you cannot expect to get much for the service rendered, but something is due for it if you have sold your goods properly. The thing is to get your dealer with you. Appeal to his reason. You may say “If you are wrong, give in,” and I agree with you, but no reasonable man expects something for nothing. He expects to get what he pays for, but not 25 per cent., or even 5 per cent., over the bargain. And if he gets a brand new length of hose “no charge” for the length that has been in use for some months, then I maintain he is getting more than he bargained for. The carwheel makers get paid for the time a wheel that has given out has been in use, less the value of the metal as scrap. Why should not you receive payment for the service your goods have rendered? But if he will not fall in line, do so yourself. You made the mistake, not he.

[TO BE CONTINUED.]

THE INDIA RUBBER WORLD has been favored by the Colonial Rubber Co., Limited, of Sydney, New South Wales, with an official copy of the new Australian tariff schedule. The rates on rubber goods under this schedule were given in this journal in January (page 110), but some additional information supplied by the Colonial company may be of interest to exporters to Australia. They say: “The method of estimating the value for duty is to take the f. o. b. value at the port of shipment, and add 10 per cent. to this amount. The duty is then calculated on this total—so that a line of goods that is listed to carry 20 per cent. actually pays 22 per cent. Outside packages of all description are free of duty, irrespective of the nature of the contents.”

Some New Rubber Factory Appliances.

SCHOFIELD PATENT BIAS SHEAR.

THE Schofield Bias Shear (patented February 19, 1907), illustrated on this page, is designed to cut all fabrics on the bias, from the softest and finest to the heaviest cotton duck used in vehicle tires or hose. The operation is entirely automatic, the stock being stripped from the roll, fed to the machine, cut and dropped on a table, or carried by conveyor far enough to be picked up and put into bunks. One belt drives the entire machine.

The cutters or knives are 75 inches long, and they will cut up to 52 inch wide fabric on a 45° angle. This angle is not adjustable. The width of the strip between, and at right angles to, the cut, can be regulated at will, from say 6 up to 36 inches. A five-step cone pulley drive is provided, giving as a minimum 10 to 12 strokes on the long cuts, increasing in number as the cuts are shorter. Within reasonable limits the cutting speed may be increased to any point at which the cut strips can be economically handled. An unusual feature of the machine is its swinging upper knife, which adjusts itself to the cut. The lower blade is firmly fixed to the bed and the upper one is swung from an horizontal shaft by two freely moving bearings. The blades are set at an angle, not only vertically, as is usual in shearing machines, but also horizontally in such a way that the cutting edges make an angle in the horizontal plane; or, looking down from above it will be seen that the cutting edge of the knives cross each other. This setting of the knives and the pivoting of the top one confines the cutting to one point so that the action is precisely like that of a pair of hand shears, the cutting is clean and free from pulling, and so accurate as to width as to make unnecessary the usual allowance for trimming when hand cut. The tendency of the knives to self-sharpen keeps the cutting edges in good condition for a long period. Duplicate knives are inexpensive and can be put in place easily.

The feeding is accomplished by a sliding bar having on it a set

of gripping fingers which reach in and under the top knife, taking hold of the newly cut edge and drawing the material forward until released by a cam. This sliding bar can be changed to five different strokes on length of travel, and the release cam can be adjusted to any desired point between each stroke, thus regulating the width of the cut fabric to any point between 6 and 36 inches.

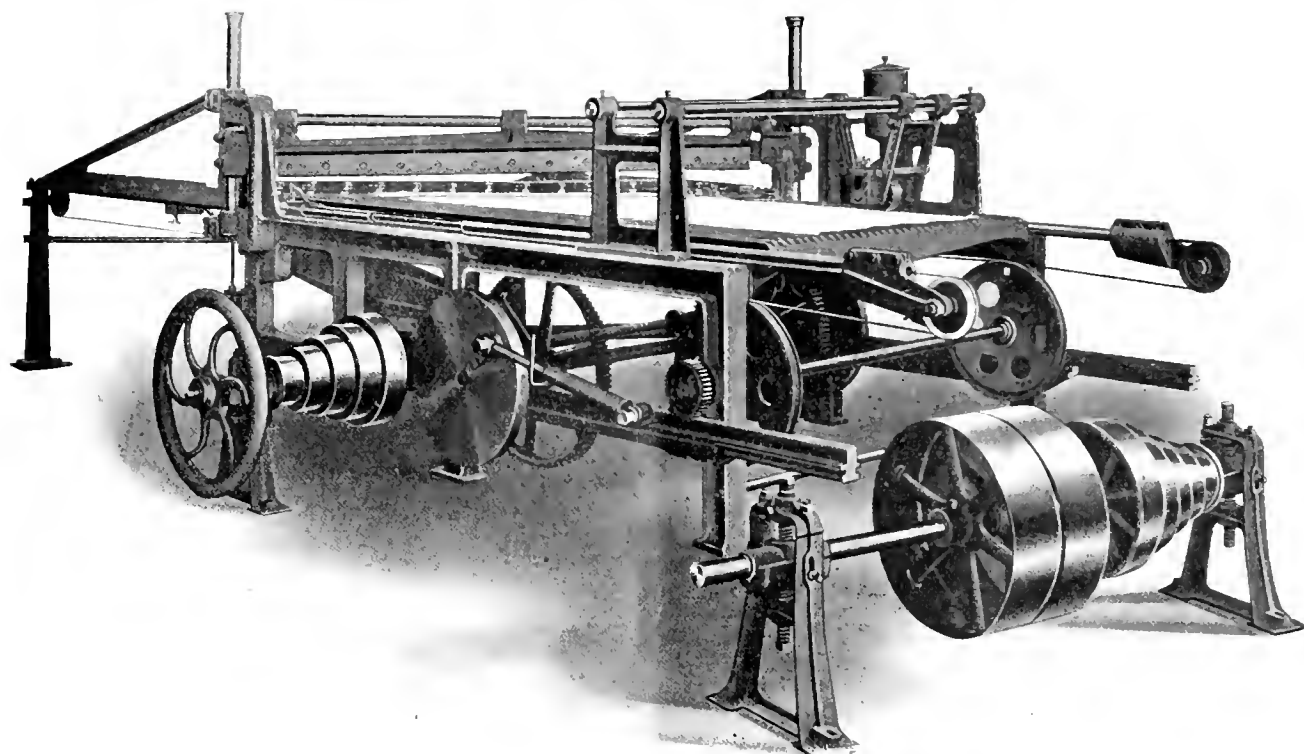
The outside floor space occupied by this machine is 9 x 18 feet, without allowance for frame work to carry stripping rolls, which take up about 12 feet additional in length.

For coated fabric some sort of a stripping device is necessary, which would be driven from the countershaft included with the machine, and this can be supplied in the form of a friction let-off with a pair of stripping rolls controlled by a friction clutch requiring more or less continued attention, or in place of the friction clutch can be supplied a variable speed device regulating more automatically the delivery of the goods to the cutters. The grippers cannot be depended upon to strip from the roll, otherwise the strength of the grip and the required pull would mutilate the edges of the cloth. On some kinds of fabric, of course, no stripping device is necessary.

The particular machine illustrated here is fitted, when desired, with a movable cementing device consisting of holder fitted with a valve regulating the flow of cement, and roller which is adjustable vertically to get any pressure desired, all sliding on two bars the full width of the machine. It is stated that one man of ordinary intelligence can operate the machine, the disposition of the cut material governing the number necessary to handle that. The makers of this machine, the Birmingham Iron Foundry (Derby, Connecticut), are prepared to supply a larger machine to cut fabric up to 60 inches wide and cutting stroke up to 60 inches.

SOMETHING NEW IN BIAS FABRICS.

E. VOLAND, a well known inventor, resident in Lyons, France, is the inventor and patentee of a machine for taking any kind of

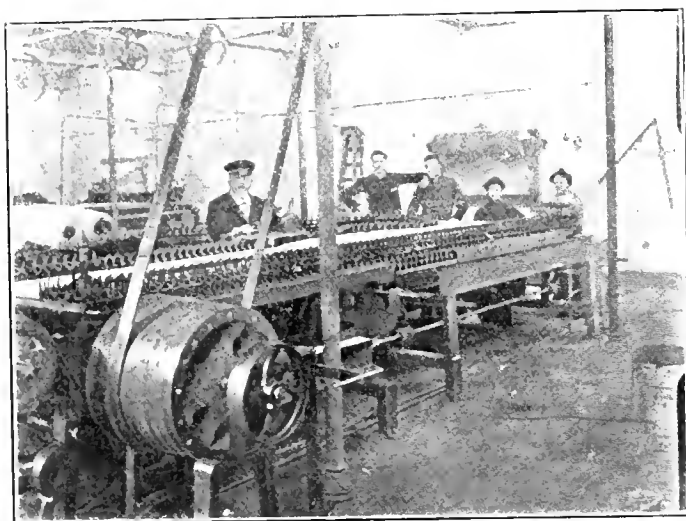


REAR VIEW OF THE SCHOFIELD PATENT BIAS SHEAR.

fabric in the roll and so stretching it that it is turned from straight weave to bias weave; then by coating it with a secret preparation, said to be 20 per cent. rubber and 80 per cent. finely divided cotton, and further by doubling the fabric over on itself, in fact making a double texture of it, he produces a wonderfully tough, cheap, bias fabric from which all the stretch has been taken. It will be seen at once that the flimsiest, cheapest cloths thus stretched and built together must form a fabric practically untearable, stronger than a fabric of equal weight made of the best long fabric, and yet infinitely cheaper. It will be further seen that this process is applicable to cotton, silks, in fact to any of the fibers used in cloth making to-day.

The matter is of present interest to the American rubber trade because of the incorporation of the Bias Waterproof Fabric Co., who have offices in New York and who expect soon to have a factory in Passaic, New Jersey, operated by the inventor himself.

Bias fabrics are not unknown to rubber mill practice to-day. In both the shoe and mechanical goods trades fabrics are cut in bias strips and used where a maximum of strength and a minimum of stretch are sought. The two points of apparent novelty in the invention are the doubling of two bias fabrics together for greater strength and the secret rubber and cotton solution which is said to be a most important part of the new fabric. To be wholly exact the doubling of two bias fabrics with rubber be-



NEW MACHINE FOR BIAS FABRICS.

[Inventor Voland at the left.]

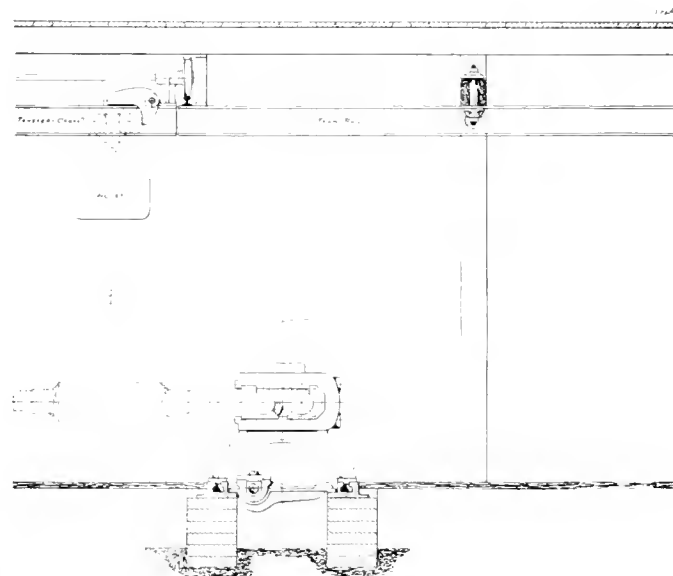
tween is, after all, not new. Back somewhere in the seventies Henry G. Tyer, of Andover, Massachusetts, manufactured a goring for the Congress arctics, where the fabric was stretched biaswise by winding it slowly over a wooden shell and winding in on one side curved pasteboard lifts, thus stretching one margin of the sheet of fabric and allowing the other to shrink. This was doubled against another sheet of fabric with rubber between, stretched in the same way, the object being to allow of the production of a strip of double texture cloth that, pulled in one direction, would be quite elastic, the product being just the reverse of what is sought by M. Voland.

The American company just formed, which has been incorporated for \$300,000, plans to form subsidiary companies to take over the production of fabrics for various lines of manufacture. For example, one company will be formed for the manufacture of balloon cloths, cotton and silk fabrics for the mackintosh trade, and whatever else the rubber clothing trade call for. Another will take up fabrics for belting, hose, and automobile tires, while still others will cover the general clothing trade and go into the manufacture of light untearable sails, non-leaking umbrella covers, tents, and so on.

Through the courtesy of the treasurer of the company, Mr. M. P. de Bor, THE INDIA RUBBER WORLD is able to present a picture of the machine used in making this bias cloth, and incidentally a likeness of its inventor.

JOHNSTON'S RUBBER MILL CRANE.

AUGUST JOHNSTON, No. 11 Broadway, New York, long known as a practical designer of rubber machinery, has brought out



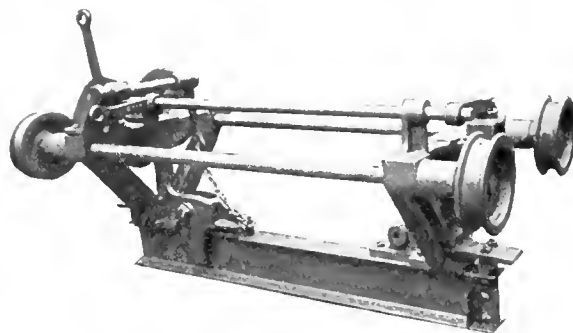
JOHNSTON'S RUBBER MILL CRANE

[Outline view of crane handling a roll from grinding mill.]

a small crane for use in rubber factories, something that all manufacturers will appreciate.

Any kind of hoist may be used, hand power, electric or pneumatic, and which can be operated from the floor, by means of pendant hand chain. This arrangement makes a simple and reliable method of transferring heavy and light loads of any description at the least cost of install, and at the same time gives an easily worked system of transferring.

In order to get the most efficient arrangement to suit any particular requirement, the outlay in general must be done to suit the building, but as this arrangement can be made to transfer the trolleys and hoists in any desired direction, it is of the



JOHNSTON'S RUBBER MILL CRANE.

[Illustration of overhead running roll.]

utmost importance to so arrange that the longest runs will be for the transfer-crane itself, and that the individual or single tramrails can be put in to reach almost any corner where it would be impossible for the main transfer-crane to cover.

In this way a transfer system can be built that will cover not only one or more buildings individually, but that can be altogether connected with each other—for instance:

Factory to connect with storehouses, loading platforms, yards and sheds. It is best suitable for loads not exceeding 2 tons, as it can be operated by hand-power. For long travels or runs, electric motors can be employed, both on the hoist and transfer-crane.

United States patent No. 744,464 has been granted to Mr. Johnston, under date of November 17, 1903.

CONTINUOUS VULCANIZATION PROCESSES.

CONTINUOUS vulcanization has been the dream of the rubber manufacturers for many years. Of course only certain lines of manufacture were thought of in connection with it, such as are produced by machinery in greater or less lengths, that is, tubing, hose, insulated wire, and sheet rubber for various purposes. For example, when the gossamer rubber business was at its height, Henry Burr evolved an appliance for electrically curing the coated fabric as it came off the spreader, his plan being to obviate the necessity of solarization. For some reason the process never went beyond its experimental stages.

Then, too, it must not be forgotten that in the days of the vapor cure, fabrics in the piece, rubber coated, were continuously vulcanized by running the piece rapidly through a heated chamber containing chloride of sulphur vapors. This up to the present time is about the whole of the record of continuous vulcanization.

In the line of mechanical rubber goods, the manufacture of hose in greater than 50-foot lengths and its vulcanization at the same time has often been mooted. The first part of this problem was successfully solved by Henry Cobb at his plant in Wilmington, Delaware, where he produced a garden hose with a lining and covering of rubber, with plies of knitted fabric between. This was run through a lead press, coated with a continuous tubular lead envelope which acted as a mold, the whole being coiled upon drums and thus vulcanized. After the cure, the lead was stripped off and remelted. His son, departing from this procedure, invented a type of mold in which the hose could be coiled and cured, and he also was able to produce garden hose in 500-foot lengths. In both of these instances, however, the vulcanization was a wholly separate process, and required an extra handling of the hose after manufacture.

Quite recently, however, a young inventor, connected with one of the great rubber companies, after much experimentation, has produced a machine which standing close to the looms that weave

the fabric insertions receives the hose uncured and winds it on a drum a few feet distant, thoroughly vulcanized.

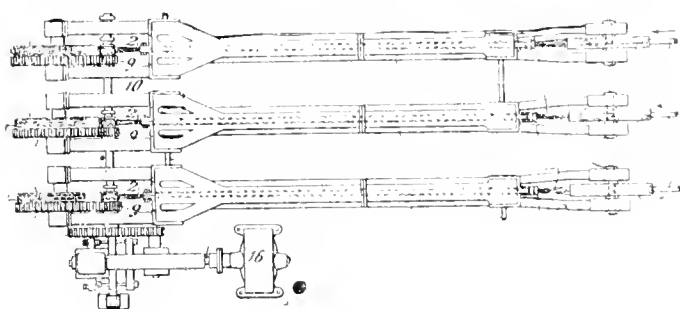
Perhaps the most strikingly ingenious part of this machine is the arrangement of supporting the hose as it passes through the vulcanizing chambers. This is done by a number of tightly stretched wires fed from one side, and over drums at the other, but so guided and held that when inside of the vulcanizing chamber they lie in corrugations in the hose forming a continuous traveling mold. The hose is thus cured straight instead of in a curve and is wrapped, if that term may be used, and unwrapped automatically.

The accompanying illustrations show in detail the parts of this machine, one of the few new and perhaps revolutionary inventions in rubber of the last decade. So far the machine has been used wholly for the manufacture of garden hose. It is quite possible, however, that it may be used for other kinds of hose, and, if it can be adapted for insulated wire and cables, it would certainly greatly simplify that portion of the rubber industry as well. The machine has been patented in all rubber manufacturing countries.

NEW PROCESS OF VULCANIZING SHOES.

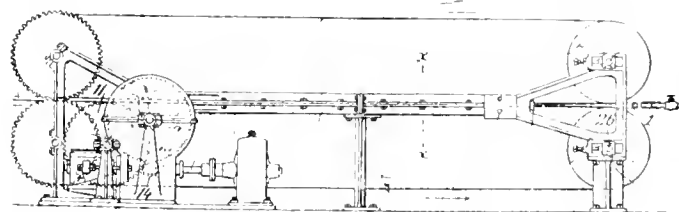
At the present time any invention relating to the manufacture of rubber goods that bears the slightest impress of novelty or practicability is of interest. Mr. Mason's patent claims, therefore, are bound to be closely analyzed. Harking back to the Marvel patents, at the beginning, it will be well to remember that they covered a sectional mold adapted for a certain type of press which formed and vulcanized a rubber shoe without a stockinette lining. The Doughty patents owned by the Atlantic Rubber Shoe Co. covered a type of mold and vulcanizing press that produced a shoe with a stockinette and other fabric lining.

The Mason patents that are here illustrated cover a mold one plate of which is in contact with the sole of the shoe, forms it into shape and, being heated, vulcanizes it, while the rest of the mold is an inclosed chamber in which the remainder of the shoe is enclosed and into which heated air is forced, the vulcaniza-



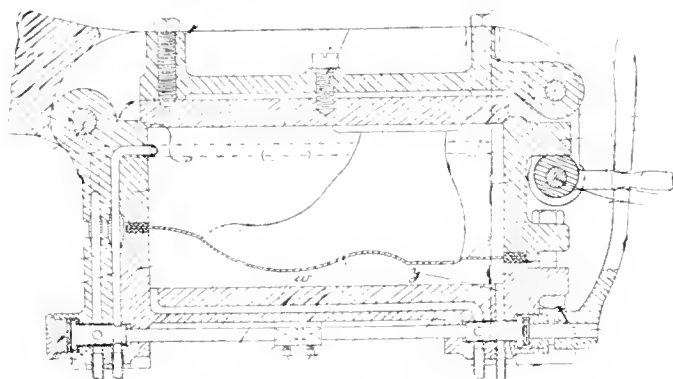
NEW VULCANIZING APPARATUS.

[Plan View of Set of 3 Vulcanizers Showing Endless Conveyors and Means for Causing their Continuous Travel Therethrough.]



NEW VULCANIZING APPARATUS.

[Elevation of the Apparatus Shown in the Preceding Illustration.]



MASON'S SHOE VULCANIZING OUTFIT.

tion of the upper being accomplished by "dry heat," while the sole is cured by what is known as "press heat."

The difficulty that at once suggests itself to the rubber manufacturer is that of working these two heats together, the normal press heat being about 30 minutes in duration, while the normal dry heat lasts from 3 to 7 hours. Of course, by compressing the air, the duration of the dry heat could be shortened, but that involves the use of Governor Bourn's patent. It would be possible, indeed, to cure the sole in 30 minutes; then cool the lower platen until the upper was cured; or the air might be exhausted from the mold chamber and the heat affected by direct radiation from the metal sides in much less time than the normal dry heat. However the plan works out, it is certainly ingenious and should produce a shoe with a sole clearer cut and denser than under the old process. As for the upper, it will probably appear to the casual observer unchanged.

New York City Buys Fire Hose.

SIX PLY HOSE FOR HIGH PRESSURE SERVICE.

THE fire department of the city of New York, by way of preparation for the high pressure system soon to be introduced on an important scale, has purchased a quantity of hose of a class not hitherto used by this department—6 ply rubber hose of 3 inches internal diameter.

The specifications require lengths of 50 feet, with New York fire department standard couplings attached, each length to weigh, with couplings, not more than 100 pounds. Hose to be made 6 ply, with 7 ply capped ends, of duck woven from best long staple Sea Island cotton, and the best Pará rubber; to be sufficiently pliable to permit easy handling; duck to weigh not less than 22 ounces to the yard when made 40 inches wide; rubber lining to be hand made, not less than 1/12 of an inch thick, not less than 3 calender, and so firmly united to the cotton fabric that it cannot be separated without breaking or splitting in two; cover of the hose to be made of the same quality rubber; rubber and duck to be antiseptically treated. The brand name of the manufacturer is to be placed on each length.

Hose must be capable of standing a test pressure of 400 pounds to the square inch, and to go out straight, without writhing or twisting more than one revolution or elongating more than 30 inches per length, or increasing in exterior diameter more than 1/8 inch at any point. The hose must not contract in length under pressure. In addition to the general test, pieces selected at random will be subjected to this special test:

"(a) From said length a piece one inch long shall be cut from any part of the hose; this one inch piece shall then be placed on a mandrel, which latter shall be suspended from centres so as to turn freely and a weight of 20 pounds shall be applied at right angles to the point of separation of the remaining layers of duck, and the layers must not unwind more than 3 1/2 inches in 10 minutes.

"(b) A piece of tube or rubber lining, which is 1/12 inch thick, shall be taken from any part of the same length of hose and shall have placed upon it marks 2 inches apart; the rubber shall then be stretched until the marks are 12 inches apart and immediately released, then re-marked so that the new marks shall be exactly 2 inches apart; the rubber shall then be stretched until the new marks are 12 inches apart, and remain stretched in that position for 10 minutes without breaking, and upon being released and allowed to stand for 10 minutes, the last marks shall not be more than 2 1/8 inches apart, showing a permanent set of not more than 1/8 of an inch."

A piece of the duck without rubber friction when tested in the piece, with jaws one inch wide, must show a tensile strength of not less than 300 pounds for the warp threads and not less than 375 pounds for filling threads; all yarn used to be not less than 1 1/2 inch staple.

The hose to be guaranteed by the manufacturer to stand, for the full length of four years from the time it is put in use, a pressure test of 400 pounds to the square inch, together with the ordinary wear and tear and use of the hose, but the guarantee shall not be held to apply where damage may be determined by the department to have been caused by being run over by vehicles or stepped upon by horses, or caused by fire or acids.

THE LATEST PURCHASES OF HOSE.

Bids for supplying hose for the New York fire department were opened on March 3, as announced previously in THE INDIA RUBBER WORLD [March 1, 1908—page 203], as a result of which contracts were awarded as follows:

For the Borough of Manhattan:
30,000 feet 2 1/2 inch 4 ply rubber fire hose; awarded to the Republic Rubber Co., at \$1.04 per foot.
30,000 feet 3 inch 6 ply rubber hose for high pressure system; awarded to The Diamond Rubber Co., at \$1.73 1/2 per foot.

For the Borough of Brooklyn:
10,000 feet 2 1/2 inch 4 ply rubber hose, awarded to The Diamond Rubber Co., at \$1.13 1/2 per foot.
10,000 feet 3 inch 6 ply rubber hose for high pressure system; awarded to the Republic Rubber Co., at \$1.64 per foot.

One lot of 20,000 feet of 3 inch 5 ply rubber hose for regular service only brought out two bids, at a price higher than the commissioner desired to pay, and he decided there had not been enough competition, and ordered new bids. No bids were invited on the date mentioned for cotton hose.

MILLIONS OF FEET OF FIRE HOSE.

A LOT of figures regarding city fire department equipment appear in a volume of special reports of the United States census of 1905—"Statistics of Cities Having a Population of Over 30,000." The number of cities under review is 154. The total length of fire hose of all kinds reported by these cities is 4,216,438 feet, summarized as follows:

	Feet.
Group I.—15 cities, Population 300,000 or over.....	1,851,644
Group II.—25 cities, Population 100,000 to 300,000.....	779,638
Group III.—47 cities, Population 50,000 to 100,000.....	855,052
Group IV.—67 cities, Population 30,000 to 50,000.....	730,104

The estimated population of these cities in 1905 showed a gain of about 50 per cent. over the decennial census returns of 1900. There has not been a proportionate increase in the amount of fire hose reported, however. At least, a similar report on 140 cities in 1898 showed a total of 3,361,160 feet, adding 50 per cent. to which would give a total of over 5,000,000 feet. Since 1898 the number of cities having over 30,000 inhabitants has increased to 154, and the total amount of hose reported is only a little over 4,000,000 feet.

There is no established relation between the amount of hose reported and the estimated population of the cities. To take 10 cities at random, we arrive at this average of length (in feet) of hose per 1,000 of population:

Cities.	Population.	Feet Hose.	Average per 1,000.
New York	4,000,403	494,536	124
Philadelphia	1,417,062	100,000	70
Baltimore	546,217	113,015	207
Pittsburgh	364,161	98,050	270
New Orleans	309,639	40,960	132
Minneapolis	201,974	54,974	266
St. Paul	197,023	48,250	240
Cleveland	437,114	52,650	120
Haverhill, Mass.....	37,830	20,625	557
Holyoke, Mass.....	49,934	24,550	401

The smallest city in the list of 154 is La Crosse, Wisconsin—population 29,078, with 15,050 feet of hose, or 519 feet per 1,000 inhabitants. Taunton, Massachusetts, with 30,967 inhabitants, reports the same number of feet of hose. Seventy cities report a smaller total amount of hose. The smallest amount of hose reported by any city is 3,000 feet, for Harrisburg, Pennsylvania, with 54,807 population, or 55 feet per 1,000 inhabitants.

There is no guarantee of the accuracy of the hose statistics. The amount credited to New York is 494,536 feet, as long ago as 1905, whereas the recent report by the New York Board of Fire Underwriters gave only 5,768 lengths in service in the boroughs of Manhattan and the Bronx, giving only 288,400 feet by not considering that some of the length are less than 50 feet. There is considerable hose in service in the other boroughs, but nothing like enough to bring the total up to the census report figures.

THE United States consul at Iquitos reports the beginning of a survey for a British company, to determine the practicability of constructing a railroad 75 miles long to a point on the Ucayali river, accessible by launches, from a rich rubber district, the product of which under present conditions must be transported down the Madeira river to Manaus, thus giving Brazil the benefit of export duties on a strictly Peruvian product.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

AT THE Manchester Motor Show, held February 7-15, there were one or two tire novelties that may claim attention. At Messrs. Charles Macintosh & Co.'s stand were exhibited several Kempshall tires, this firm being the manufacturers for the Kempshall Tyre Co. of Europe, Limited,

TIRES AT A MOTOR SHOW.

whose head offices are at Trafalgar buildings, Northumberland avenue, London. The main feature of this tire is the broad square tread containing elliptical depressions at intervals—at least this is my way of putting it. Some of the cars in the Show were fitted with this tire, which I have heard highly spoken of. In contradiction to what prevails in other quarters the company announce that they do not give any guarantee whatsoever with the tires, though no trouble or expense is spared in their production. The form of the tread is of course to act as a non-skid device and judging from results it gives great satisfaction on this head. An exhibit which attracted a good deal of attention was the Slec tire, a Manchester product which has had extensive trials during the last two years. The novelty in its construction is that it is a solid tire with the resiliency of a pneumatic, bands of flexible steel being placed between the tire and the rim and a considerable air space being allowed in the tire. No inner tube is used, and there is consequently no danger of puncture. Satisfactory results are stated to have been obtained on 10,000 mile runs.

The Palmer Cord tire is now no novelty, but one cannot say this of the complicated looking electrically driven machine which was in operation at the show, making up the tires from the solution threads. This proved a popular attraction, biscuits of Pará rubber having now lost their erstwhile powers of drawing public attention. The North British Rubber Co. were not in evidence this year, but a new comer in the firm, I. Frankenburg & Sons, Limited, invited attention by their show of "Franken," a new filling for motor tires. This substance has the general appearance of brown substitute and a filling costs from £1 15s. to £1 19s. per wheel, according to size. The Elastes Co. also had an exhibit, their product looking much more like brown substitute than it did at first, when it was a yellow color.

Apropos of this topic, I may say that a good deal of experimental work has been done in various quarters during the last year or two to improve these fillers, the general composition of which is well known. An important point about the Frankenburg product seems to be in the short time required in filling, this in the case of other elastic fillings being usually three or four days in order to allow the liquid to get thoroughly solidified. Another material of this class, though not represented at the show, is that brought out by Herr Pflümet, of Dresden, and called "Pflumatic"; it is composed of gelatine and glycerine, but has compressed air blown into it to form a spongy material in which the air is retained in the cavities.

The spring wheel is continually being heard of in some form or other. One of the latest ideas comes from America and I was

OTHER TIRE TOPICS.

solemnly informed the other day that the rubber tire was doomed. I am told, however, by those who had paid a small sum of money for an option to purchase the patent rights that they had sacrificed the deposit in preference to going any further in the matter. The main drawback seems to be the loss of speed, amounting to nearly 50 per cent.

Motor tires generally have been reduced in price in accordance with the fall in rubber, but the causes of the fall have not as a rule been entered into. Messrs. Michelin, however, have let their customers into some trade details and in their circular explain that the fall is due to the closing of 17 American facto-

ries and the consequent accumulation of Pará rubber at Liverpool. I do not find in this announcement any list of these factories, however, and the fact of any such shutdown probably will be in the nature of news to American readers.

On February 18 this works was put up for sale by auction at Manchester, but the bidding was not at all brisk, and, despite the eulogies of the auctioneer, the first bid of £1,000 only rose to £1,400, at which the property was withdrawn. This

WERNETH RUBBER WORKS.

works, which is by no means of imposing dimensions, was started about ten years ago by Mr. Cresswell, who at that time left the Hyde Imperial Rubber Co. (now the Unity Rubber Works), after making a fortune in the cycle tire boom. Mr. Cresswell had built himself a large residence in the neighborhood of the Hyde Imperial Works, and the Werneth Works, which he subsequently started, are less than a mile away. After a few years Mr. Cresswell gave up the business, and in 1903 the works passed into the possession of Mr. Salmond, whose main idea was to install his son therein. The son, however, having embarked upon other ventures, the owner now wished to dispose of the works as a going concern, which, though small, has shown regular profits.

The conversion of this prosperous private concern into a limited company only concerns the rubber trade to a small extent. If the business had consisted only

R. J. DICK, LIMITED.

of the well known balata belting and horseshoe pads one might easily have supposed that the new competition arisen since the expiring of the balata belting patent was the primary cause of the conversion, and the large figure of £150,000 for good will might have come in for criticism. The business, however, is very largely in ordinary leather boots and shoes, and is competing successfully with the large concerns at Northampton and Leicester. From what I hear the capital of £250,000 and the sum asked for good will are not considered excessive.

NEXT to the prevailing topic of the decline in prices of raw rubber, the topic which has of late attracted the most attention in the Liverpool trade is the action between the North Western Rubber Co., Limited, against Huttenbach & Co., in which the

TRADE JOTTINGS.

former sought to entirely reject a large consignment of pontianak on the ground of its inferiority. The other side maintained that the North Western company were bound to accept it at a reduction in price fixed by arbitration, according to recognized Liverpool custom. A large number of brokers and rubber manufacturers have given evidence in London on one side or the other, but owing to the indisposition of the judge trying the point as to the Liverpool custom the case has been adjourned and at the time of writing is not concluded.

All sorts and conditions of people seem nowadays to take a close interest in the rubber trade and the use of rubber street pavement is being widely discussed as the only panacea for a forthcoming glut in the raw rubber market. I cannot say that I have much faith in an immediate revolution in this direction, and I am interested to note that our London contemporary does not think that there are enough data yet to go upon to show that rubber pavement is suited to heavy traffic. At the same time the *Journal* recognizes that some new use for rubber is imperative in order to sustain prices and proposes therefore a meeting of those interested in order to discuss the situation. Personally I think this is rather a matter for the future when the plantations produce a much larger proportion of the world's output than is at present the case.

A fire recently occurred at the Dialene recovered rubber works

at Leyland, considerable damage being done. This works is now entirely in the hands of the Baxter family. Mr. J. E. Baxter, I regret to say, has been seriously ill with pneumonia, but has happily pulled through.

EVERY now and then I refer to certain metallic oxides which interest me from both a rubber and mining point of view. In the

ZINC OXIDE.

last twelve months both lead and zinc oxides have fallen considerably in price, but while lead continues on the down grade zinc has had an upward spurt during the last week or two. This is due to an agreement among the principal Silesian (German) producers to restrict the output. Unlike copper, which the world cannot get on without, zinc is never likely to go much above £30 per ton because its use is not really indispensable. America now takes the lead in zinc production, having quite recently got ahead of Germany. As the production of zinc has increased so much of late years a fall in price to the point at which mining is no longer attractive seemed imminent and it is not surprising that something in the nature of an arrangement among producers has come to pass. Although an increasing amount of zinc ore is being mined in England none of the oxide used in rubber works is made in the country. The principal mine in Cumberland belongs to the well known Vieille Montargis Co., of Belgium, and the ore is shipped to Belgium to be smelted and converted into oxide by burning.

THOUGH not on a scale to effect the threatened congestion of raw rubber supplies, a reference may be made to a comparatively new use of rubber. This is in connection with the pianola, which is gaining increased favor among those who are not piano players. Vulcanized rubber tubing about $\frac{1}{2}$ inch diameter and of lengths from 8 to 24 inches or more is now generally used in the mechanism instead of the metal pipes previously employed.

MR. ARTHUR DU CROS has been elected member of parliament for Hastings, in place of his father, Mr. Harvey Du Cros, who resigned his seat owing to pressure of business. The new member, who had as his liberal opponent a son of the late Sir W. Vernon-Harcourt, made tariff reform a strong feature, and a good deal was said about foreign competition in motor cars and tires. Mr. Du Cros, who is 36 years of age, has been closely concerned for some years with the Dunlop Pneumatic Tyre Co., first as works manager and now as director of the businesses at London, Birmingham, and Coventry. As in the case of Mr. Harvey Du Cros at the general election, motor cars played a very conspicuous part on the polling day.

THE COTTON SITUATION.

CHINA, long an important consumer of cotton goods, appears to be a larger producer of raw cotton than has been generally supposed, though as yet no trustworthy statistics exist. A member of the American consular service at Shanghai estimates the total possible production of Chinese cotton at 590,000,000 pounds. The Chinese are showing a determination to improve the products of their cotton fields, in which they are encouraged by the growing demand for raw cotton by the mills of Japan. If success attends the various plans now being worked out, the consul referred to thinks that "American cotton will only be bought by Japan when her requirements exceed China's production." Cotton manufacturing under modern systems is also making progress in China, in addition to the native methods of working cotton, which give rise to a large consumption.

* * *

THE growth of cotton in Mexico is increasing. The local production does not yet equal the consumption. Imports of raw cotton show a falling off, however, and some Mexican cotton is exported. *Daily Consular and Trade Reports* says: "The exports of cotton from the United States to Mexico during the fiscal

years 1905, 1906 and 1907 were valued at \$3,768,126, \$1,620,443 and \$36,413, respectively."

THE EDITOR'S BOOK TABLE.

ROYAUME DE BELGIQUE. MINISTERE DE L'INDUSTRIE ET DU TRAVAIL. Monographies Industrielles, Aperçu Economique, Technologique et Commercial. Group VI. Industries du Caoutchouc et de L'Amiante. Bruxelles: 1907. [Paper. 8vo. Pp. 237 + plates + map.]

THE industrial monographs now being issued by the Belgian ministry of industry and labor form a series unique in one respect. It is not usual for a governmental office to publish works of this class, and when the attempt is made the books produced are not apt to be of a practical character. The volume before us, however, devoted to the caoutchouc and asbestos industries, could hardly have been better written, or more informing, considering its scope and purpose and its limited size. The object of this series seems to be to give briefly accurate information regarding the more important industries of Belgium, and the fact that the volume is devoted to rubber of itself indicates the estimation placed upon this industry by the government of that kingdom. The rubber industry there, by the way, is more extensive than may be generally supposed, there being named 30 factories devoted to production of rubber and asbestos goods, and with only one or two exceptions these employ rubber.

The volume begins with a chapter on the trees and plants producing rubber and the character of their product, with notes on the methods of extracting latex and preparing rubber and statistics of the world's production. The properties of rubber are discussed and the materials employed in connection with it in manufacturing. Details of factory practice are next referred to, and a description of the principal articles of rubber manufacture. Incidentally gutta-percha and balata receive the same attention in this volume as india-rubber. A separate division of the work relates to asbestos and its industrial uses and treatment. A number of informing illustrations relate to preparing crude rubber and operations in rubber factories, with further factory illustrations devoted to asbestos. The most interesting single feature of the work is a map of the world on considerable scale, showing the distribution of native rubber species and also countries where rubber plantations have been formed, different colors being used for the several species.

The author of this work is not named, except that M. Gustave van den Kerckhove is mentioned in connection with the map, and it is understood that this well known Belgian rubber expert collaborated in the preparation of the text of the volume.

KALENDER FÜR DIE GUMMI-INDUSTRIE UND VERWANDTE BETRIEBE. 1908. . . By Edgar Herbst. Mit der Beilage: Jahrbuch der Kautschuk-Industrie. Dresden: Steinkopff & Springer. [1907.] [Leather. 24mo. Pp. 454. Price, 4.50 marks.]

IN this little book the German rubber company manager or factory superintendent has in most convenient form for reference a large amount of information which is likely to come into frequent use and which without such a compilation is very often difficult to put one's hands on. It gives the latest information regarding the various associations in the German and Austrian rubber trade, notes on the import duties of the principal countries, tables of comparative rubber prices in the money of different countries, per pound and per kilo; specific gravity of rubber and other materials, statistics of rubber production and of rubber goods imports and exports; a summary of patent laws—but these are enough to suggest that the book contains a very wide variety of information. The volume each year brings all its data up to the latest date, including a review of progress in the industry during the preceding year, the more important patents, and so on.

ALSO RECEIVED.

RUBBER Insulation for Conductors. By Fred. J. Hall. Reprinted from *Electrical World*. 25 pages. [Abstracted in *THE INDIA RUBBER WORLD*, January 1, 1908.]

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED FEBRUARY 4, 1908.

- N**O. 877,927. Annular knife. L. G. Hoffmann, New Rochelle, N. Y.
 877,933. Water bottle stopper. H. P. Kraft, New York city, and M. C. Schweinert, West Hoboken, N. J.
 877,961. Tire construction. W. F. Stearns, Batavia, N. Y.
 877,970. Pneumatic tire. O. Uhlmann, Taunton, Mass.
 877,978. Corset. M. Bachura, Collyer, Kans.
 878,015. Tubular metallic spring tire. J. K. Parker, Longbeach, Cal.
 878,039. Arch supporter. C. E. Bullard, Brookline, assignor of one-half to G. R. Stetson, New Bedford, Mass.
 878,070. Playing ball. C. T. Kingzett, Kensington, and E. C. Kingzett, Caterham, England.
 878,075. Pneumatic tire. H. D. B. Lefterts and F. De Camp, Orange, N. J.
 878,180. Piston rod packing. L. M. Byrnes, St. Louis, Mo., and G. H. Kendrick, Little Rock, Ark.
 878,254. Golf ball. W. Faylor, Leicester, England.

Trade Marks.

- 30,017. National India Rubber Co., Bristol, R. I. The word *Champion*. For rubber footwear.
 30,018. *Same*. The word *Colonial*. For rubber footwear.
 30,021. *Same*. The word *Location*. For tennis shoes.

ISSUED FEBRUARY 11, 1908.

- 878,572. Machine for making rubber footwear. A. C. Squires, Akron, Ohio, assignor of one-eighth to R. T. Dobson, Akron, Ohio, one-fourth to E. G. Lahr and two-sixteenths to C. N. Russell, Cuyahoga Falls, Ohio; one-sixteenth each to C. Seun, Monroe Falls, Ohio, N. Huber, Akron, Ohio, and H. E. Bowman, Cuyahoga Falls, Ohio; and one-sixteenth to C. H. Stahl and one-tenth to G. W. Gridley, Akron, Ohio.
 878,502. Wheel. C. Adams Randall, New York City.
 878,730. Horseshoe pad. E. A. Johnson, assignor to T. A. Smith, both of Hot Spring, S. D.
 878,749. Manufacture of India-rubber boots and shoes. A. Schulze, Washington, D. C.

Trade Marks.

- 30,273. Carl Breiding & Sohn, Soltau, Germany, and Newark, N. J. The representation of a bird. For rubber footwear.
 29,097. The Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. The representation of a bear. For rubber footwear.
 29,189. Hannoversche Gummi-Kamm-Compagnie Actiengesellschaft, Hanover-Limmer, Germany. The word *Shamrock*. For rubber tires.
 29,191. *Same*. The word *Shamrock*. For combs.
 29,261. *Same*. The representation of a shamrock within a circle surrounded by the name of the company. For rubber tires.
 31,018. Continental Caoutchouc Co., New York city. The words "*Keep your eye on Continentals*." For rubber tires and accessories.
 31,121. Pax Mfg. Co., Boston. The word *Par*. For rubber nipples.

ISSUED FEBRUARY 18, 1908.

- 879,186. Cushion tire wheel. C. A. Marien, St. Louis.
 879,199. Pneumatic tire. B. F. Schirmer, Indianapolis, Ind.
 879,299. Syringe. [Vaginal.] W. R. Murphy, New York city.
 879,306. Rubber. [Overshoe.] H. O'Sullivan, Haverhill, Mass.
 879,312. Elastic vehicle tire. E. L. Perry, Paterson, N. J.
 879,360. Artificial hand. C. M. Broady, South Bend, Ind.
 879,378. Machine for turning rubber shells of platens. D. W. Filstead, assignor of one-half to A. R. Ames, both of Chicago.
 879,388. Article of rubber compound. W. Kiel, Butler, N. J., assignor to American Hard Rubber Co.
 879,610. Vehicle tire. P. E. Doolittle, Toronto, Ontario.
 879,732. Anti slipping tread for boots and shoes. N. J. Busby, Boston, assignor to L. A. Busby, Chelsea, Mass.
 879,768. Process for making shields or armor for pneumatic tires. O. A. Hensel, Pittsburgh, Pa.

ISSUED FEBRUARY 25, 1908.

- 879,802. Lawn sprinkler. H. T. Packard, Pasadena, Cal.
 879,981. Golf ball. C. L. Reade, Bexhill, England.
 880,060. Supporting sheath for train pipe coupling hose. G. S. Wood, Chicago.
 880,274. Cover for pneumatic tires. C. A. Brophy, Hinsdale, Ill.
 880,332. Wheel rim for pneumatic tires. C. S. Scott, Cadiz, assignor to F. A. Seiberling, Akron, Ohio.
 880,342. Golf ball. E. W. Thurlow, Northcote, Victoria, Australia.
 880,389. Surgical pad. J. A. Murray, New Haven, Conn., assignor to The Seamless Rubber Co.
 880,444. Abdominal supporter. M. Donaldson, Oklahoma, Okla.

Trade Marks.

- 21,744. R. P. Kinney, Huntington, N. Y. The letters *P. D. Q.* For tire repair plugs.

- 32,208. The Strobel & Wilken Co., New York city. The words *Rubber-Aeck*. For tips.
 32,213. Ungari-sche Gummiwaaren-Fabrik-Actiengesellschaft, Budapest, Hungary. The word "*Tauril*." For rubber and asbestos packing.

ISSUED MARCH 3, 1908.

- 880,496. Syringe. [Vaginal.] L. C. Barnes, Fremont, Ohio.
 880,587. Apparatus for manufacturing pneumatic tires. T. Sloper, Devizes, England.
 880,610. Safety window catch. L. D. Way, Rugby, N. D.
 880,669. Bottle stopper. R. Keller, Detroit, Mich.
 880,756. Pneumatic horse collar. H. R. Rasmussen, Aztec, N. Mex.
 880,904. Back supporter. J. H. Mueller, Oakley, Ill.
 881,026. Spring cushion for automobile tires. J. P. Parsons and W. Fleming, Pittsburgh, Pa.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents for American Intentions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 5, 1908.]

- 22,545 (1906). Woven wire or chain band to prevent rubber tires from slipping. F. Banks, Southend-on-Sea.
 22,590 (1906). Hose nozzle for controlling the flow. H. W. G. Harding, Streatham, London.
 22,600 (1906). Stopper with rubber ring. M. Ouillet, Montigny sur-Vingeanne, and Compagnie Francaise des Produits Fixator, Paris.
 22,616 (1906). Rubber band for tire covers. J. Dodon, Courbevoie, France.
 22,634 (1906). Elastic tire with table core. J. Guetton, La-Tour-de-Millery, France.
 22,642 (1906). Tire treads molded with recesses to prevent slipping. J. and A. G. O'Brien, London.
 22,702 (1906). Tire formed of plate springs having tread blocks of rubber or other material. H. Bauer, Wurttemberg, Germany.
 22,719 (1906). Process of moulding tire covers. A. E. Harris, Southport, and Charles Macintosh & Co., Ltd.
 22,741 (1906). Puncture indicator for tires. T. and R. Sloper, Devizes, Wiltshire.
 22,793 (1906). Continuous elastic tire with independent air recesses. J. Ancel and J. Joulet, Paris, France.
 22,821 (1906). Plate for holding heel protectors. J. Leach, Old Colwyn, North Wales.
 22,909 (1906). Solid tire formed with cavity on the side next the rim. J. P. Elliot, Bellingham, Northumberland.
 22,947 (1906). Non skid device for solid tires for heavy vehicles. G. H. P. Wucherpfenning-Schubert, London.
 22,951 (1906). Pneumatic tire with flexible metallic strips imbedded in the cover. H. Theis, Cassel, Germany.
 23,003 (1906). Spring wheel with the tread resting upon rubber cushions, pneumatic or otherwise. S. Marples, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 12, 1908.]

- 23,058 (1906). Arrangement for securing tires to twin wheels or twin tires on other wheels. F. W. Brown, York.
 23,071 (1906). Tire formed of alternate rings of leather and rubber. J. Bowack, London.
 23,081 (1906). Elastic tire formed of sections of rubber and other material, arranged in circumferential and transverse series. Hartridge Tire Syndicate and A. W. Torkington, London.
 23,100 (1906). Elastic tire of alternate segments of rubber, leather and the like. A. W. Richards, London.
 23,138 (1906). Solid tire of alternate sections of rubber and other materials. A. Latimer, Alpertown, Middlesex.
 23,138 A (1906). Tire cover with foundation fabric of rubbered cord units, side by side, in one or more layers. *Same*.
 23,144 (1906). Tire cover with thickened thread. E. W. Williamson, Market Rasen, Lincolnshire.
 23,149 (1906). Apparatus for cleaning floors, the cleaning materials held to canvas lined rubber. H. Lester, Cardiff.
 *23,203 (1906). Repair plug for tire punctures. R. P. Kinney, Huntington, New York.
 23,212 (1906). Hose reel. F. J. Irwin, London.
 23,242 (1906). Tire of springs and rubber blocks. A. H. Huth, Hungerford.
 23,261 (1906). Non skid band for tires. H. Cooley, Leicester.
 23,273 (1906). Waterproof wrapper for spare motor tires. B. Brooks, Birmingham.
 23,331 (1906). Tire rim with detachable flange. A. J. Boulton, London. (Société des Pneumatiques Cuir "Samson," Paris, France.)
 23,347 (1906). Pneumatic tire. W. J. McMullen, Sligo, Ireland.
 23,359 (1906). Tool for removing tire covers. W. James, Birkenhead.
 23,399 (1906). Vehicle springs with rubber cushion to lessen shock. P. McKay, Murchison, West Australia.

23,502 (1906). Binding for the soles of "plimsoll" shoes. I. Frankenburg and I. Frankenburg & Sons, Ltd., Salford, Manchester.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, FEBRUARY 19, 1908.]

23,681 (1906). Method of reclaiming rubber by dissolving waste in oxygenic derivatives of terpenes melting below 180° C., and precipitating either the rubber or the impurities from the solution thus obtained in the usual manner. G. B. Ellis, London. (Les Produits Chimiques de Croissy (J. Basler et Cie., J.) Paris, France.)

23,715 (1906). Side slip preventing attachment for tires. H. W. Prange, London.

23,777 (1906). Non skid band for tires. C. W. Pradeau, London.

23,782 (1906). Spring wheel and a tire of rubber or metallic springs adapted to the same. G. R. G. Rowe, London.

23,786 (1906). Detachable tire rim. D. L. Laillault, Courbevoie, France.

23,788 (1906). Bottle stopper with rubber ring. J. Hermann, Cincinnati, Ohio.

23,876 (1906). Heel and sole protector. F. J. Walton, East Finchley, Middlesex.

23,939 (1906). Bottle stopper with rubber ring. S. A. Jackson, Heaton Moor, Lancashire.

23,954 (1906). Inflatable toys in the shape of animals and the like. T. H. Sample and Charles Mackintosh & Co., Ltd., Manchester.

23,962 (1906). Spring wheel and elastic tire. Boghos Pacha Nubar, Cairo, Egypt.

23,970 (1906). Tooth syringe for introducing medicaments. H. Noffke, Berlin, Germany.

24,100 (1906). Supplementary wheels with rubber tires to prevent side slipping of vehicles. S. W. Newcom, London.

24,110 (1906). Means for preventing side slipping. A. W. Leslie and H. Harris, London.

24,238 (1906). Solid rubber tire with two treads. F. C. Woods, London.

24,250 (1906). Means of preventing side slip. O. V. Thomas, London.

24,262 (1906). Pneumatic tire formed of an endless rope, with or without an inflated inner tube, and strengthened by helical ribs. R. C. Sayer, Bristol.

THE FRENCH REPUBLIC.

Patents Issued (With Dates of Application).

370,759 (July 6, 1907). E. G. Perkins. Rubber heel.

370,865 (July 12). Domouzeot. Leather strip for interior of tire treads.

370,987 (July 18). C. Duboyal. Protective tread for tires.

380,107 (Sept. 28, 1906). E. Decauville. Apparatus and process of vulcanizing articles of caoutchouc.

380,110 (Sept. 29). E. Decauville. Apparatus for vulcanizing articles of caoutchouc.

380,021 (June 7, 1907). Alaluqetas. Pneumatic tire tread.

380,075 (July 19). F. C. Hood. Rubber shoe.

380,250 (July 25). Michelin et Cie. Process for the manufacture of pneumatic tires and covers.

380,276 (July 26). E. Lange. Pneumatic tire reinforced with inner spiral wires.

380,368 (July 30). Ganibong. Reinforced tire tread.

380,279 (July 27). J. R. Gammeter. Process and apparatus for vulcanization.

380,503 (June 24). Ondinet and Putois. Hydro-pneumatic elastic wheel.

380,693 (June 17). Whiteside Wheel Co. Vehicle wheel.

380,704 (July 10). M. Cosset. Removable tire rim.

380,735 (Aug. 10). K. Meriman. Elastic tire.

380,758 (Aug. 10). A. C. Brémont. Elastic wheel.

380,759 (Aug. 10). Hallam and Nittis. Vulcanizing press for pneumatic tires.

380,768 (Aug. 12). Delort and Taylor. Pneumatic tire in sections.

380,798 (Aug. 13). Macaulay and Hall. Pneumatic tire.

380,823 (Aug. 14). F. Hoyos. Pneumatic tire.

380,827 (Aug. 14). J. O'Brien. Armored tire.

380,831 (Aug. 14). A. Leonard. Sectional pneumatic tire.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 10 avenue de Vithiers, Paris, at 50 cents each, postpaid.]

RUBBER INTERESTS IN EUROPE.

DUNLOP TIRE PROFITS IN FRANCE.

THE profits of Française Société des Pneumatiques Dunlop, Ltd., for the year ended July 31, 1907, including income from investments, were £16,087 [=\$78,267.39]. The dividends were 6 per cent. on the preference shares, amounting to £2094, and 6 per cent. on the ordinary shares, amounting to £6183. The items of good will and patents have been written off the balance sheet. The report says that the French cycle trade suffered seriously during the year, with ill effects on the company's profits, and the motor tire trade has not developed with sufficient rapidity in France to make up for the loss of trade in the cycle tire department. The report was delayed, in order that the company might be in a position to pay the dividends promptly

upon their declaration. Much larger profits were earned at one time, the amount disbursed in dividends for the year 1896-'07 (ten years ago) being £29,843 [=\$145,330.96].

GREAT BRITAIN.

THE business carried on for a number of years as J. E. Hopkinson & Co., Limited, of the Pará Rubber Mills, West Drayton, Middlesex, has been purchased outright by Mr. John E. Hopkinson and will be continued by him.

W. T. Henley's Telegraph Works Co., Limited (London), report a net profit for the business year 1907 of £65,302 [=\$317,792.18], against £63,959 for the year preceding. The dividend is 4 per cent. on the preferred and 15 per cent. on the ordinary shares, as usual. The carry over is £23,050 or £1,300 more than last year.

The account of the Telegraph Construction and Maintenance Co., Limited (London), for 1907 show a net profit of £83,572 [=\$400,703.14] after charging the interest on debentures, as compared with £63,777 last year, being an increase of £20,794. The directors recommended the same dividend as last year (15 per cent.), and a bonus, making a total 17½ per cent., free of income tax. The business of the company during the year was very satisfactory, which is attributed to the fact that their equipment was steadily employed and that they were fortunate in the purchase of raw materials.

AUSTRIA-HUNGARY.

A RECENT writer on the rubber industry in this country states that 11 large factories, with a capital of 16,000,000 kronen [=\$3,248,000], employ 4,500 hands and produce goods valued at about 27,000,000 kronen [=\$5,481,000].

GERMANY.

DR. FRIEDRICH A. TRAUN, of Dr. Heinr. Traun u. Söhne (Hamburg and Harburg), and Franlein Friedel Preetorius, daughter of Commerzienrat Wilhelm Preetorius and wife, of Mainz, were married at church in the latter city on March 23.

ITALY.

A NEW company, Italian Spare Motor Wheel, Limited, was registered in London February 18, 1908, with £40,000 capital, to make and sell the Stepney spare motor wheel in Italy and most of the other countries in southern Europe, and in Egypt. Besides the parent company, in England, there were already two actual subsidiary spare wheel companies, in Germany and the United States, respectively.

FRANCE.

THE long established and successful house of A. Maurel et fils (Paris), with a factory at Boulogne-sur-Seine, producers of waterproof and soft rubber goods, has become Felix Ciret et Cie. The head of the house is now Monsieur Ciret, who has managed the business for some years. The senior Maurel and the executors of the son are silent partners.

ENGLISH BALATA BELTING FACTORIES.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We notice that in your issue of February 1, in an article on balata belting, you mention "The Manchester Balata Belting Co., of Clayton, Manchester, with which concern rumor associates the names of Messrs. Frankenburg." Will you kindly explain that neither Mr. Frankenburg personally, nor our company, have any connection whatever with this firm. Yours faithfully.

I. FRANKENBURG & SONS, LIMITED.

HERBERT STANDRING, Secretary.

Salford, Manchester, February 14, 1908.

THE weekly output of a single English make of rubber heels—"Wood-Milne"—is asserted to be 20 tons per week. A large factory is employed solely for this purpose, making both "revolving" and "stationary" heels in a great variety of forms, protected by a number of patents and registered trade marks.

Hoolihan's Fire Hose Specifications.

I HAD not seen Hoolihan for ten years, and supposed he had gone to that bourne from which no traveling man returns, when, to my delight— hale, hearty, with the old time twinkle in his eye—he entered the office. After mutual felicitations he said:

"Did ye know av me new apointment?"

"Not a word," said I: "tell me?"

"Sure th' govermint has formed a Fideral Advisory an' Inquisitorial Bureau fer th' supervision av fire hoase, an' I am th' Thravelling Expert."

"What do your duties involve?"

"Everything, me bye, from tellin' th' manufacturer how to wash rubber, ter puttin' kid gloves on th' firemin so as not to sile th' hoase. It's a gratee job. Just now I am requested be th' National Boord av Overwriters to dhraw up speccifications for the makin' av cotton, rubber-lined hoase."

"May I see them?" I asked, eagerly.



THE TRAVELING EXPERT.

"I'll rade some av thim," said he, with dignity.

"Firrst: Pit the naame av the maaker on ivery lenth of hoase, in black letthers wan foot high.

"Siccond: Pit the naame of the man that buys it on ivery lenth of hoase, with daate, price, and stenographic noates taken in sacret av the whole transaction, in black stincilled letthers wan thousandth av wan inch high.

"A. Ivery lenth of hoase shall be woven with 6 picks and 4 shovels in the filling.

"B. Where 2 jackets are used wan shall be a cardigan and the other a pilot jacket.

"C. All the cotton used in the hoase shall be tisted in the laberthry av th' Overwriters' Association and must not contain more than sivin per cent. av silk or other deeclerious substance.

"D. The internal diamether av the hoase shall be liss than the external diamether."

"That's fine," said I.

"Waait," said Hoolihan; "ther's more and betther," and he read:

"RUBBER LINING.

"A. Must contain one hundhred per cint. av pure rubber, gathered be union laabor.

"B. The wather used in washin' the rubber shall be filtered an' distilled and show no thrace av acid. Club sody-wather

havin' a yellor cast and a smoky taste is distinctly con-dinned.

"C. Ahl tubes shall be lap jinted; the laps of the workers bein' protected be ilecloth aprons as they sit at their work.

"D. Aich an' ivery tube shall have a continuous hole throughout its entire length. This hole shall be coated with special soapstone, supplied only be th' Overwriters' Labrytrys,



TESTING THE WATER.

so that after vulcanization the hole may be pulled out without tearin' av the rubber linin'.

"COOPLINGS.

"Cooplings shall be pit an boath av the two inds av aich hoase. No firemin shall be allowed to pit the ends av two hoases together except with cooplings. Manny caases av new-mony have resoolted from the min holdin inds of hoase to-



COUPLINGS.

gether to lave the wather thru during conflagrations. Such conduct is rhraprehinsible, perrilous, and waasteful.

"TWIST.

"Anny undue amount av twist is looked upon as showin' ingratitude on th' parrt av the manufacturer. The guarantees

should be so made, tho' th' more he twists th' tighter he is cinched.

"ELONGATION.

"All tists for elongation shall be sacret. No man likes to have the worl'd know how much his leg has been pulled.

"WEIGHTS.

"Ivery manufacturer av hoase shall be required to wait from three to five years afther sellin' a lot to know whether he has made or losht money on the thransaction.

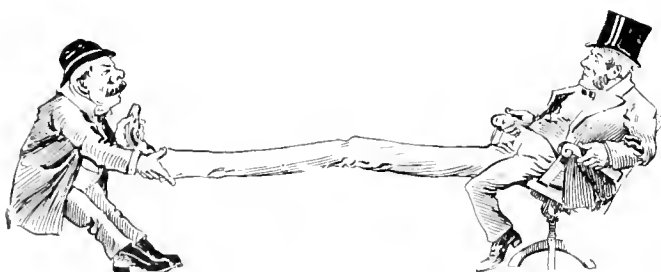


TWIST.

"CHEMICAL TESTS.

"A. Matther ixttracted be assetone shall not be more than wan quarther av wan per cint. av the chewin' gum presint in the laberathry at th' time of the tists.

"B. Th' saponifiable matther extractid be alcoholic potash shall be aquil to 3 caakes of soap for aich and ivery lenth of hoase.



ELONGATION.

"C. The minirel matther ixttractid, if it is gold, shall be the property of the laberathry.

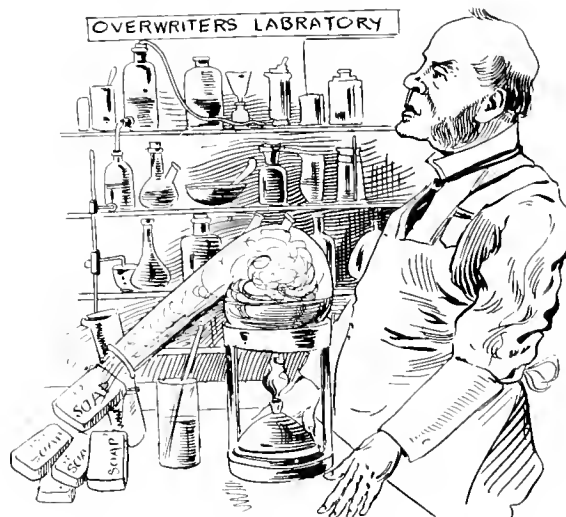
"FIZZICAL TISTS.

"A. As th' hoase is ter be used to carry coald wather, it should be tisted with hot stame ter be blown thro it, tin days at a time, at tin day intervals, for tin months.

"B. At the ordinary hydrant pressure the raate of flow through good hoase should be twinty gallons per second, for frish wather; for Hooniyadi wather, sivinty gallons per second.

"C. Lave the manufacturer stand with his ear at wan ind of a lenth av hoase, and a city official stand with his lips at the other ind. Half way bechune the two stands a man be

th' naame av John Doe. Be watchin the faace av the wan and the lips av the other, John Doe, hereinafter called the' middleman, is able to tell whether the hoase is right, an how much (financial) pressure it will stand.



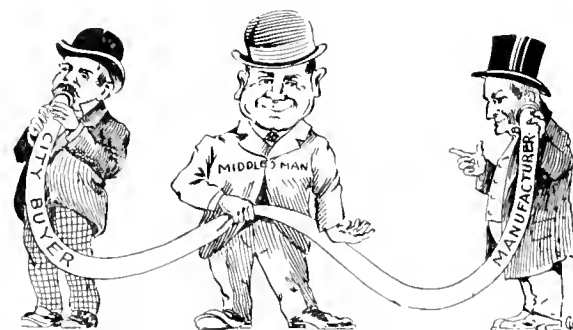
EXTRACTION OF SAPONIFIABLE MATTER.

"GARRANTEES.

"Aich length av hoase shall have a tin plate four inches square firmly affixed upon its outside. The furrst year this shall be tisted fur rust, and shall not show more than wan tint av wan per cint. The second year it must not show more than two per cint, the thurd year it shall not show more than foive per cint. Should anny av these per-centages be exceeded the manufacturer to agree to supply new lengths av hoase free av cost. Purchasers av hoase are advised to insist on a four-year garrantee covering this pint specially."

"About those tin tags on the hose, what is the use?" said I.

"Whisper me bye; tho' is the best part av the whole. The purchaser can keep thim tags bright as silver, or black with rust. No matter how good they are or how honest the hoase it is out av the manufacturers' hands. Av he wants his tags kept bright, lave him make John Doe shine them up."



PRESSURE.

"Hoolihan," said I, "those specifications are as good, indeed, better than most; but don't you think this expert bossing of another man's business is being carried too far? Are you really helping either the maker, or the buyer, of hose by framing them?"

"It's me Bureau, and me Boord of Overwriters, and mesilf as an expert, that I am afther hilpin—dom the rist," said Hoolihan, genially.

The Progress of Rubber Culture.

PLANTING CONDITIONS IN CEYLON.

THE *Ceylon Observer* reports an interview with Mr. L. W. B. Davidson, who recently visited Ceylon after an absence of several years in England. He found that some rubber he planted 14 years ago had been mostly cut down at a time when those in charge of the property did not appreciate the value of rubber. One of the few surviving trees, he says, "has just given a crop of 16 pounds for the year." Mr. Davidson thinks that where tea has been interplanted with rubber the tea will gradually die out, and this will tend to keep up the satisfactory price of tea. On one estate in Kalutara Mr. Davidson found rubber produced at a cost of 1s. 0½d. [= 247½ cents] per pound, "including management and all charges f. o. b." Mr. Davidson remembers when the cost of producing tea in Ceylon was 2½ times as high as now, and he is hopeful that the cost of producing rubber can be further lessened.

The members of the planters' association in the Kalutara district of Ceylon reported at the end of 1907 having 23,000 acres planted to rubber alone—an increase of 8,722 acres during the year. The amount of rubber secured was 195,766 pounds in 1906 and 285,209 pounds in 1907. They estimate the 1908 production at 449,400 pounds. There are about 7,000 acres planted to rubber in the district but not represented in the association.

The Matale Planters' Association reports 19,723 acres planted to rubber, whereas at the end of 1905 it was estimated that in this district there were 1,359 acres of cacao interplanted with rubber and only 538 acres with rubber alone. The rubber yield for 1908 is estimated at 67,670 pounds.

Sir Thomas Lipton, who is so largely interested in tea planting, was a recent visitor to Ceylon, when he said in an interview published in the *Ceylon Observer*: "I intend materially to increase my financial interest in rubber. I do not think there can be a sounder investment. The uses of rubber will develop very

much yet, and the talk of a substitute being found for the purposes rubber is now used for is in my opinion all nonsense. Before I leave the island I shall have further involved myself in the rubber industry, and I have already a fair amount on my [tea] estates."

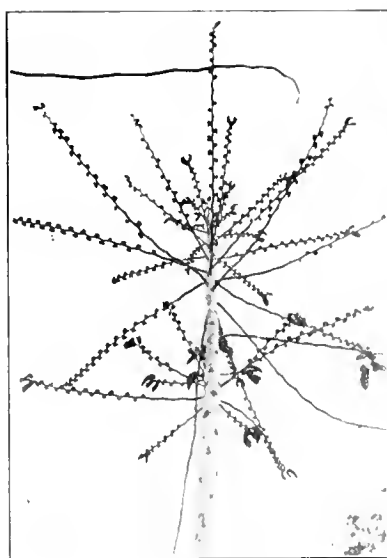
In a recent lecture on Ceylon before the Colonial Institute in London, Sir Henry A. Blake, formerly governor of that colony, predicted that by 1913 the Ceylon output of rubber would amount to 14,500 tons. The chairman who presided at the meeting said that all looked forward to the time when Ceylon rubber would pave London streets.

Rubber was quoted at Colombo on January 23 at 2.30 rupees [= 74½ cents] per pound, against 3.87½ rupees [= \$1.25¾] one year previously. For several months prior to January 23, without regard to the decline in London, plantation rubber sold steadily at Colombo at 3.30 rupees [= \$1.07], owing to large contracts made at that price. These contracts having been completed, rubber at once fell a rupee on the pound.

Ceylon and the Federated Malay States have been visited lately by Mr. Fred T. Waterhouse, of Honolulu, as special commissioner of the Hawaiian Rubber Growers' Association. His object was to study rubber growing conditions generally, but especially as related to Ceara (*Manihot*) rubber, a species which grows rapidly and well in Hawaii. An account of the Hawaiian planters' association appeared in THE INDIA RUBBER WORLD December 1, 1907 (page 87).

RUBBER PLANTING IN NICARAGUA.

THE Tuma River Plantation Co., of Nicaragua, incorporated under the laws of South Dakota, November 5, 1907, with \$375,000 capital, have acquired an estate of 3,000 acres in the department of Matagalpa, Nicaragua, near the city of the same name. The company have considerable *Castilloa elastica* on the ground,



"Castilloa Elastica."

[Top of tree about 38 feet high. photographed in August, 1907, after leaves had fallen, showing appearance of seed branches.]



"Castilloa Elastica."

[Seed branch, natural size.]



"Castilloa Elastica."

[This view, of a man carrying two seed branches from a cultivated tree, will give a fair idea of the length of the latter.]

planted by a former owner, and intend planting up to 1,500 acres. The company state that rubber from four and five year old trees was gathered and sold last year, of the value approximately of \$3,000 gold, and that about 20,000 trees are now ready for tapping and will be dealt with this year. The neighboring property of the Nicaragua Improvement and Development Co., owned by practically the same interest, is reported to have 310,000 planted *Castilloa* trees standing. The Tuma company are encouraged by the action of the government providing for the introduction of Chinese coolie labor on an extensive scale. The officers of the company are C. G. Thomson, president; G. W. Sweetser, vice-president, and J. F. Mosby, secretary and treasurer; the general offices are at No. 15 Broad street, New York.

RESULTS FROM PLANTING "CEARÁ."

In a comprehensive report on Ceará rubber (*Manihot Glaziovii*), by W. H. Johnson, director of agriculture for the Companhia de Mocambique, says that the records he has compiled seem to indicate that, except in a very few instances, profitable results have not been obtained from the cultivation of the Ceará tree. "Still," he says, "it should be borne in mind that the Pará rubber tree was largely cultivated for a considerable period before a satisfactory method of tapping was discovered, and it is therefore quite possible that when the tapping of Ceará trees has been more carefully and generally studied, better results will be forthcoming." Summing up the results noted in Portuguese East Africa, Mr. Johnson concludes that if due consideration be given to the unfavorable conditions under which the trees for the most part have been grown, "the prospects of profitably cultivating the Ceará rubber tree in this territory are distinctly encouraging."

PLANTING IN THE GERMAN COLONIES.

DR. PAUL PREUSS, technical director of the Neu Guinea Compagnie, estimates the extent of rubber planting in the German colonies as follows, the figures relating (1) to the number of hectares, (2) the equivalent number of acres, and (3) the approximate number of trees:

	Hectares.	Acres.	Trees.
German East Africa	1,250	3,080	1,500,000
German New Guinea	1,100	2,718	603,000
Kamerun	700	1,730	900,000
Samoa	450	1,112	260,000
Togo	80	198	41,300
Total	3,580	8,847	3,304,900

The planting in German East Africa is practically all "manicoba" (*Manihot Glaziovii*), but this species figures slightly in the other colonies, where *Hevea*, *Ficus*, *Castilloa* and *Funtumia* are under cultivation.

NANCHITAL PLANTATION CO.

THE Nanchital Plantation Co., incorporated under the laws of Arizona with \$300,000 capital authorized, is named after a large mountain near its property in the canton of Minatitlan, in Vera Cruz, Mexico, bordering on the Uspanapa river, and convenient to the port of Coatzacoalcas. The company report the ownership of 3,000 acres, of which 1,000 are intended to be planted to sugar cane, and the remainder to rubber and other crops. There are on the property some 4,000 rubber trees planted in 1902, which are reported to be making good progress. The officers are J. B. Huling, president; H. M. Scambler, vice president; and Oscar Meyer, secretary and treasurer, the offices being at No. 178 Monroe street, Chicago. Mr. Meyer was formerly an officer of The Aztec Plantation Co., an Illinois corporation formed to develop the tract known as "La Esperanza," which now has become the property of the Nanchital Plantation Co.

MAKING TAPPING KNIVES AT SHEFFIELD.

THE long established cutlery house of George Wostenholm & Son, Limited, of Sheffield, England, after having added tea pruners to their list of products on a large scale, have entered the field of supplying rubber tapping knives. Hitherto they have

supplied such knives to one customer only, but this is a patent article that they make to order and so are unable to supply other parties with it. They advise THE INDIA RUBBER WORLD, however, that at the present time they are applying themselves to the production of other patterns of rubber tapping knives, as so far the supply of these on the market have not seemed to meet the demand.

DIRECTORY OF RUBBER PLANTATIONS.

A SUBSTANTIAL volume of 206 pages, entitled "Rubber Producing Companies," has been brought out by Messrs. Gow, Wilson & Stanton (Limited), London, tea and rubber brokers, who were the first it is believed to attempt to classify and arrange briefly for the investor the leading features of companies planting rubber in the Far East. The first edition of their book two years ago listed only 35 companies, whereas the volume now under notice gives details regarding 151 companies, nearly every one of which is organized under British laws, and all capitalized in sterling. All are planting rubber, though some are still interested in tea or other products. Of these 61 are planting in Ceylon and India, 57 in Malaya, 25 in Borneo and elsewhere in the East, and 8 in Africa or South America. It is stated that the total amount of share capital issued by these companies is approximately £15,000,000 [= \$75,000,000].

This list, by the way, does not include a large number of companies, for the most part comparatively small, with headquarters in the Far East and whose capitals are in rupees or British dollars. In the case of each company is given the date of organization, lists of directors and the London office, capital authorized or issued, situation and area of the plantation, details of planting, report of production if any, and dividends to date—the whole forming a most useful work of reference for those interested. Another feature of the book is a directory of directors in the various countries, embracing no fewer than 370 names.

By the way, the *Financial Times* (London) has compiled from the records at Somerset House a list of the rubber planting companies registered there during 1907, totalling 62, with an aggregate capital of £5,263,260 [= \$25,613,654.79]. Of the companies referred to 1 is formed to work in Brazil, 6 in Ceylon, and 16 in Malaya, leaving 38, or more than half the number, to operate in other parts of the world, showing that British interest in rubber is no longer confined to the British colonies in Ceylon and the Malaya peninsula.

A GOODYEAR EXPERIMENT.

ONE of the few men living who knew Charles Goodyear well is Mr. A. D. Schlesinger, who has been so long associated with the hard rubber industry at College Point. Mr. Schlesinger's descriptions of the inventor's enthusiasm in connection with rubber, his utter disregard of time or money, and his belief that rubber could do anything and be of use everywhere, are most graphic.

For example: impressed with the belief that if ships' bottoms were covered with rubber they would never become foul, Mr. Goodyear ordered a great quantity of Russia iron, had it coated with hard rubber, and submerged it in salt water.

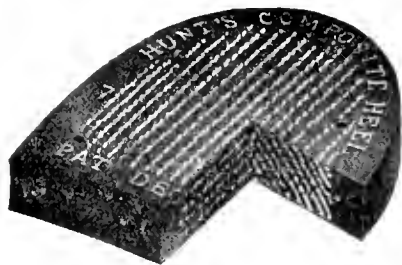
"After an interval the sheets were drawn up for examination, and," said Mr. Schlesinger, "we found out what hard rubber would do. The sheets were so covered with barnacles and weed that they looked like mats. The experiment cost hundreds of dollars, while the case might just as well be proved for ten."

CICELY Rubber Estates Co., Limited, pays an *interim* dividend of 15 per cent. on account of the year ending March 31, 1907. Ten per cent. was paid for the whole of the preceding year and 5 per cent. for 1904-05.

New Rubber Goods in the Market.

HUNT'S COMPOSITE RUBBER HEEL.

THIS anti slip heel is made, as the cut will suggest, of rubber, through which run strips of cotton duck parallel with each other and penetrating the heel from one surface to the other on a slant of 45 degrees. The composite heel is said to excel in wearing qualities a heel of rubber alone, while it is lighter and the cotton adds to the protection against slipping. This heel has flat surfaces with no corrugated fanciful designs, cavities or projections to fill up or wear off, and is made of the



HUNT'S RUBBER HEEL.

same substance and has the same wearing quality from bottom to top, so that it gives the same service as to slipping after being worn down to almost nothing. The slant of the cotton performs the service in the way of holding nails that is given by iron rings, washers and so on in some other rubber heels. [Frank W. Hunt, No. 393 Massachusetts avenue, Boston.]

EDISON ELECTRIC MILK WARMER.

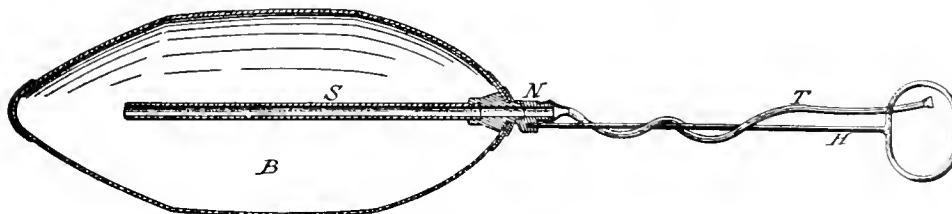
THIS illustration failed through some mischance to appear in connection with an article in this department last month headed "The Baby Milk Warmer." An important use for it is in keeping milk in a child's bottle at a proper temperature by means of an electric current, which current is readily obtainable in any household where electric lighting has been installed. [Edison Electric Illuminating Co., No. 360 Pearl street, Brooklyn, New York.] By heating the coil and putting it in a bowl of water the baby's bath may be prepared.



MILK WARMER.

"SAFESURE" GAS MAIN BAG.

THIS recently patented article is a safe, efficient, and economical bag for closing gas mains in case of a leak. As shown in the cut, the rubber bag is affixed to a rigid central stock which extends within the bag, the outer end of the stock being fitted



"SAFESURE" GAS MAIN BAG.

with a rigid handle and inflating tube. When the bag is to be used it may be wrapped around the central stock and readily inserted through the small opening in the side of the gas main. When the bag is wholly within the main and ready to be inflated, it may be held in position with one hand by means of the handle during inflation. When the bag is fully inflated the

handle may readily be unscrewed and removed. These bags are designed to go through the regulation size hole and two bags may be inserted through the same opening if desired. [Mineralized Rubber Co., No. 18 Cliff street, New York.]

THE "KRAETZER" BUCKLE.

A new buckle for use on rubber footwear illustrated on this page is the "Kraetzer" (pronounced Cratesir), which possesses

several distinctive features. Not the least important of these is the absence of any raised part when the buckle is closed, and such as in some other makes of buckles are liable to tear women's skirts, not to mention wearing threadbare men's trousers. In other words, when this buckle is "set" on a rubber which is being worn it is absolutely flat and smooth, instead of having an extended tip. The two cuts herewith show the new buckle applied to specimens of footwear for women and men, respectively. The Hood Rubber Co. (Boston) are supplying footwear on which this buckle is used, and the manufacturers of the buckle are The Taunton Rivet Co., No. 3 Fern street, Taunton, Massachusetts.



Women's
Empress.

Men's
Gaiter.

THE "KRAETZER" BUCKLE.

A RUBBER SPONGE INVIGORATOR.

RUBBER sponges, that is, good ones, are not easy to make. Indeed, if the rubber trade of the world were put upon the witness stand under oath, there would be many confessions of costly experiments and failures. Among those that did not fail



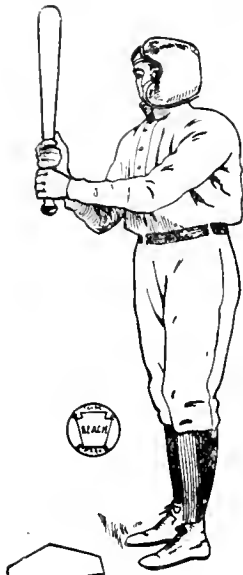
RUBBER SPONGE INVIGORATOR.

in the attempt to make good sponges are the Faultless Rubber Co. (Ashland, Ohio), who almost from the first made all types of sponges of a quality that could not be criticized. The result is that they are doing a very large business in this line to-day. They make, for example, an oval sponge in seven sizes, sponge brushes in

three sizes, and the Sponge Invigorator, an illustration of which is shown herewith. The invigorator is a flexible rubber strap with a loop handle at each end, and is made either with a rubber sponge surface on one side, which is called the "single" or both sides of the strap are faced with rubber sponge, the "double" invigorator.

PNEUMATIC BATTER'S HEAD PROTECTOR.

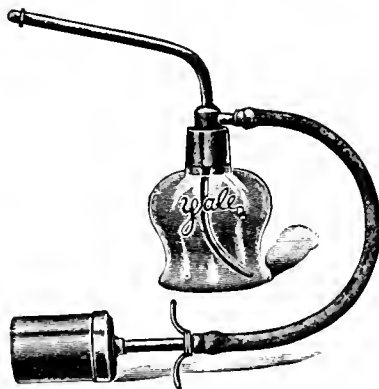
THE article shown in the cut herewith has been adopted in use by very many baseball players, including professionals of note. So many batters have been put out of the game by being struck in the head by pitched balls as to cause a demand for protection for the batter, which has led to the designing of the Pneumatic protector. This article is so designed as to protect every part of the head that is liable to injuries. Our feature of its construction is that it is supplied especially for either right or left hand batters. The article retails at \$5. [A. J. Reach Co., Philadelphia.]

BATTER'S HEAD PRO-
TECTOR.

pressure than in types of atomizers used hitherto. The tubes and

THE "YALE" ATOMIZER.

A NEW line of atomizers, adapted for spraying oil or water, is the "Yale," the distinctive features of which are well indicated in the accompanying cut. The chief point of difference as compared with other instruments of the kind is the pump which is used, instead of a rubber bulb, to furnish the pressure necessary for atomization. This hand pump is referred to as being readily operated and as capable of affording a stronger



THE "YALE" ATOMIZER.

tips can be sterilized by boiling. [Becton, Dickinson & Co., Rutherford, New Jersey.]

MANDEVILLE STEERING WHEEL MUFF.

THE muff shown in this cut should become very popular with chauffeurs and motorists, particularly those who go out in cold or inclement weather. This muff is a leather fur-lined covering for the steering wheel, large enough to permit the same freedom in handling the wheel that one would have without it. At the post is a split ring which holds the muff in place, while running through it from the ring is a spring which shapes it in position so as not to interfere with the controls and which holds it up against the body. The muff protects the lap of the driver from the storm, keeps the hands warm and dry, and prevents cold winds from going up his sleeves. For summer use a lighter weight muff is supplied, made of rubber, and which is rain and wind proof.



STEERING WHEEL MUFF.

or under the cushion. [Mandeville Steering Wheel Muff Co., Bluffton, Indiana.]

"SPECIAL" RUBBER DAM CLAMP.

A NEW article for use in dental practice and designed by Dr. G. V. Black, is the rubber dam clamp illustrated herewith, and which has been designed for use in special situations—that is, on third molars and in certain cavities difficult to treat. One of the essential features of this clamp is its very strong spring. It is referred to as staying where it is put when once in position on a tooth, the strong spring being better than a weak one, particularly if the clamp must have some rough handling. The strength of the spring does not hurt the tooth if the clamp be put on and taken off carefully. This form is made in right and left shapes. [The S. S. White Dental Manufacturing Co., Philadelphia.]

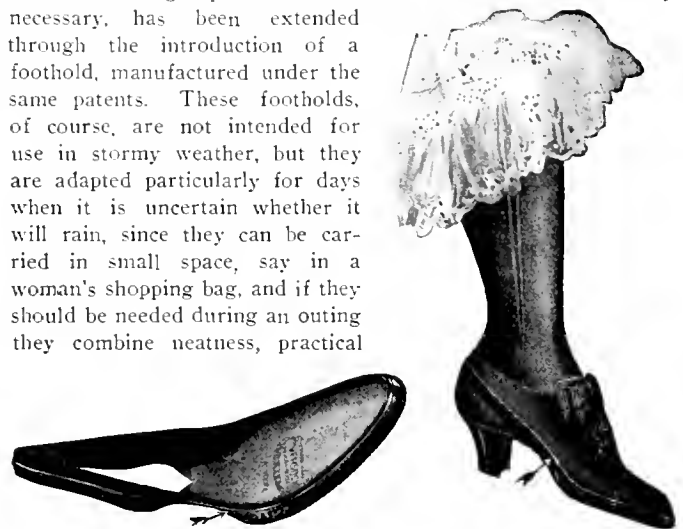


RIGHT.

LEFT.

THE "EVERSTICK" FOOTHOLD.

THE line of "Everstick" rubber footwear, a distinctive feature of which is the giving of adequate protection from moisture without covering any more of the leather shoe than is absolutely necessary, has been extended through the introduction of a foothold, manufactured under the same patents. These footholds, of course, are not intended for use in stormy weather, but they are adapted particularly for days when it is uncertain whether it will rain, since they can be carried in small space, say in a woman's shopping bag, and if they should be needed during an outing they combine neatness, practical



THE "EVERSTICK" FOOTHOLD.

invisibility, and protection. They do not rob a gracefully formed foot of its attractiveness, and there is no discomfort in wearing them. The Everstick foothold is made in different toes and in three colors—black, white and tan. These goods are supplied in handsome rubber lined pouches—one for each pair. The patents are controlled by The Adams & Ford Co., Cleveland, Ohio.

THE PNEUMATIC PENHOLDER.

ONE who is constantly using a pen is likely to welcome any device that will lessen the irksomeness of keeping the fingers



THE PNEUMATIC PENHOLDER.

so much in one position. It is with this object in view that the penholder shown in the illustration has been introduced on the market. The illustration indicates the position and the relative length of the rubber attachment. It is a particularly soft and yielding rubber, and so firmly attached that it is not likely ever to get out of place. There is need for little descriptive matter, but it may be added that the manufacturers use the phrase in connection with this penholder that "the soft pneumatic tip prevents writers' cramp." [American Lead Pencil Co., No. 43 West Fourth street, New York.]



HON. EBEN S. DRAPER
[Lieutenant Governor of Massachusetts.]



ARTHUR W. STEDMAN.
[President of the New England Rubber Club.]



GEN. CHARLES H. TAYLOR
[Editor of the Boston Globe.]

The New England Rubber Club's "Best Dinner."

THE annual banquet of the New England Rubber Club, held at the Algonquin Club, Boston, on the evening of March 11, adds one more to the series of successful functions of which the association has an unbroken list. There were about 200 present, and after a half hour's social they gathered in the beautifully decorated banquet hall and enjoyed one of the best dinners that the Algonquin has ever served.

Before introducing the first speaker, President Arthur W. Stedman spoke as follows:

"We are assembled here this evening to celebrate the addition of a New Year to the life of our association, the New England Rubber Club. Our organization was born with the new century, and began with less than 100 members. We came together primarily for the purpose, as pointed out in our constitution: 'For the promotion of social intercourse among gentlemen connected with the rubber industry, especially those residing in New England.'

"In the eight years of our existence we have grown to a membership of 230, and are steadily growing in numbers. We have extended our membership far beyond the borders of New England, so that our list of members includes representatives from every state in the Union where the rubber industry is carried on, and from Canada, and

from Europe. Our Club has proved to be what might be termed a silent arbitrator between competitors. It has brought together warring factions, and without the necessity of explanation or discussion, has settled by a handshake misunderstandings among men who have found each other good fellows after all, even if they are competitors. Thus, to this extent our Club has fulfilled its mission, and has warranted the enthusiastic support it has received.

"With the future opportunities opened to us through affiliations with older trade organizations, we have the promise before us of a far broader field of usefulness.

"During the few years of our life, we have had the support of many distinguished gentlemen, who by their presence at our banquets, and who by their eloquence, have encouraged us in the work of our organization. To-night we are again fortunate in having with us to encourage us, some of New England's most distinguished sons. Of these I have the great honor of introducing the Hon. Eben S. Draper, a gentleman, who like ourselves, is still burdened with the cares of business, but who, unlike many of us, is yet in the harness not because of the necessity of further accumulation of the 'mighty dollar,' but because of his vital interest in the thousands of



HON. LOUIS A. FROTHINGHAM
[Speaker of the Massachusetts House of Representatives.]



HON. GEORGE A. HIBBARD
[Mayor of Boston.]

wage earners who make up the industrial army which he has mobilized at that model manufacturing encampment, the Draper town, 'Hopedale.' Not only does he thus serve the wage earner locally, but broadly throughout the state, through the office of lieutenant governor which he dignifies. Gentlemen, I present to you the next governor of Massachusetts."

Lieutenant Governor Draper in a very happy vein "poked fun" at the club members concerning the alleged formal dinner which he was then attending, wondering what their "informal" dinners were, the point being that the spirit of friendly informality had so taken possession of members and guests that the social instincts of all present were very much in the ascendant—not that the diners were not orderly, for when the speaker outlined his ideas regarding such organizations as are called "trusts," the unionizing of the labor classes, state regulation of railroads, practical preventatives of public ownership, and subjects of that type, they listened most attentively and appreciated his telling points with generous applause.

The next speaker, the Hon. George A. Hibbard, mayor of Boston, was thus introduced by President Stedman:

"There comes a time when every city awakens to the realization of its needs, particularly for a competent, honest business like executive. 'Bigger, better, busier Boston,' once an alliterative catch phrase, has suddenly become an established fact. Friends and foes of the present city administration know full well who is responsible for this change. As there are only friends here to-night, perhaps his Honor, the mayor, will lay aside his habitual reserve, and tell us how he has done so much in so short a time."

Mayor Hibbard, the reform mayor of the city of Boston, is possessed of a visage that is a joy to the caricaturist. He knows it and enjoys it himself and his stories of jokes on himself were irrepressibly funny and put him instantly on the best possible terms with the diners. The mayor carefully avoided politics in his speech, because he said he did not know anything about them. He did, however, show where he stood on the question of municipal ownership, and incidentally made an appeal to the business men of Boston to take a more vital interest in the business end of their own city. At the close of his speech he was tendered a most enthusiastic ovation.

He was followed by the Hon. Louis A. Frothingham, former speaker of the Massachusetts house of representatives, whom President Stedman thus introduced:

"I will now call upon a gentleman who, while he has passed but a comparatively few years upon life's journey, has, during those few years, accomplished much. Ever ready to do his duty, he responded without hesitation to the call of country and of state, serving both with ability and with sacrifice of self. The people of Massachusetts are only waiting for the polls to open to declare him lieutenant governor. I take pleasure in presenting the Hon. Louis A. Frothingham, ex-speaker of the house of representatives."

Mr. Frothingham spoke but briefly as he claimed that he was most anxious to listen to the speech of the special guest of the evening, General Charles H. Taylor, of the *Boston Globe*, whom President Stedman introduced as follows:

"As our minds range far afield towards England, the cartoonist's likeness of 'John Bull' at once appears in the form of a jolly, rotund Britisher. If we think of our own country, we have depicted the lean, cadaverous, hawk visaged 'Uncle Sam.' So too, in New England a certain happy looking individual, alert appearing, of wondrous girth, wearing besides his expansive smile, a broad belt, upon which is displayed the mystic words, 'The largest circulation in New England,' typifying a great Boston daily, and that man is General Taylor. Look at him with the eye of intellectuality and you observe the girth, meet him as we do here and you cannot fail to enjoy the smile. Gentlemen, I am proud to introduce to you General Charles H. Taylor, proprietor and editor in chief of the *Boston Daily Globe*."

General Taylor spoke on modern newspapers and gave to the listeners an hour's talk that for rhetoric, interest, and sparkle, could not be improved upon. Although the hour was late when he began, none left the room, preferring to lose their trains rather than miss a word of the general's speech. When at last he sat down everybody was sorry, or, as one gentleman put it, "I could have listened to him all night."

OBITUARY NOTES.

ALFRED PEABODY, the youngest son of Henry W. Peabody, died on February 27 at the home of his father, in Beverly, Massachusetts, aged 28. Several months ago he bought a controlling interest in the Sterling Manufacturing Co., formerly of Salem and now of Gloucester, Mass., and engaged in producing a rubber substitute. He held the office of treasurer in this concern.

WILSON B. SOLLDAY, a prominent resident of Easton, Pennsylvania, and a brother of Edward R. Solliday of Trenton, New Jersey, died March 8 at his home, aged 69 years. Edward R. Solliday is a member of the New Jersey Rubber Co., at Lambertville. The deceased was also an uncle of Quartermaster General C. Edward Murray, of Trenton, one of the proprietors of the Empire and Crescent plants in Trenton. The funeral of Mr. Solliday was held on the afternoon of March 10, from the residence of his son in law, W. F. Packer Allis, at Easton.

JOHN HARTER OAKLEY, father of Clifford H. Oakley, formerly general manager of the Grieb Rubber Co., and still identified with the rubber industry of Trenton, New Jersey, died at his home in Cleveland, Ohio, early in March. His death was caused by bronchial pneumonia.

The many friends of Mr. A. D. Thornton, superintendent of the Canadian Rubber Co. of Montreal, Limited, were shocked recently to hear of the death of Mrs. Thornton, which occurred very suddenly at their home, after an illness of only a few hours, following an entertainment at tea on the preceding afternoon of a few friends. Mrs. Thornton was Miss Susan Avery Nimmo, daughter of the Rev. Mr. Nimmo, of Brockville, Ontario.

FREDERICK A. CLAFLIN, treasurer and general manager of the Avery Chemical Co. (Boston), a concern numbering among its products a line of chemicals for the rubber industry, died in Boston on March 14, in his sixtieth year. Mr. Claflin was active in various business channels, but since 1897 he had given his whole attention to the Avery company, with which he held a nominal connection before. A son of the deceased, Alan A. Claflin, is president of the Avery Chemical Co.

NEW TRADE PUBLICATIONS.

THE SEAMLESS RUBBER CO. (New Haven, Connecticut) have issued a new catalogue of Fine Rubber Goods and Drug-gists' Sundries, liberally illustrated with cuts of their principal products. A marginal index facilitates ready reference to the catalogue. [678" x 914". 117 pages.]

THE DIAMOND RUBBER CO. (Akron, Ohio) issue a new catalogue of Mechanical Rubber Goods, embodying details regarding an increased line of products commensurate with the growth of the factory, which employs more than ten times as many workers as were on the payroll nine years ago. In addition to the staple and special lines of mechanical goods, the catalogue includes a number of items of hard rubber—a line not usually found in connection with this branch of the industry. [5" x 7". 127 pages.]

THE GUTTA-PERCHA AND RUBBER MANUFACTURING CO. OF TORONTO, LIMITED, issue their 1908-09 catalogue of Maltese Cross Rubbers, illustrated as usual with excellent cuts of their extensive line of boots and shoes. [334" x 6". 72 pages.]

ALSO RECEIVED.

A. J. REACH CO., Philadelphia.—1908 Spring and Summer Sports. 42 pages. Fall and Winter Sports, 1907-08. 34 pages.
Osgood Sayen, Philadelphia.—"Everlasting" Blow-off Valve. 12 pages.

The Rubber Trade in the Dominion.

CONSOLIDATED COMPANY'S SECOND ANNUAL.

THE second annual meeting of the shareholders of the Canadian Consolidated Rubber Co., Limited, held at Montreal, on February 26, was marked by a full attendance and complete harmony. The report of the board of directors, which was read and approved, appears in full below. The following shareholders were elected directors for the ensuing year: D. Lorne McGibbon, George W. Stephens, J. H. McKechnie, James Robinson, C. C. Ballantyne, A. Pringle, D. Coulson, V. E. Mitchell, W. R. Allan, E. W. Nesbitt, and Sherley Ogilvie. Later the official board was made up as follows:

President and Managing Director—D. LORNE MCGIBBON, re-elected.
Vice President—MAJOR GEORGE W. STEPHENS, re-elected.
Second Vice President—J. H. MCKECHNIE (CA new office).
Chairman Executive Committee—JAMES ROBINSON (CA new office).
Secretary-Treasurer—P. D. SAYTOR, succeeding F. H. Ward.
Assistant General Manager—ELLIWOOD H. WARD (CA new office).

ANNUAL REPORT TO THE SHAREHOLDERS

Your directors beg to submit to you the second annual report of the company, covering a period of ten months, from March 1 to December 31, 1907.

The work of reorganizing and systematizing the business of the subsidiary companies has proceeded steadily along the lines as originally laid out, with the view of bringing the progress of the various companies more fully under the practical control of the management of this company. A scheme has been devised whereby the monthly results of all the companies may be compared and the benefit of any special process in manufacturing, which might formerly have accrued to one company only, is now shared by all. The consolidation of the purchasing, which now is practically all done by this company, has resulted in a substantial reduction in the prices paid for much of the raw material used in the business.

Since the last meeting, the outstanding shares of The Granby Rubber Co., Limited, amounting to 250 shares, have been acquired and, subsequent to the end of your fiscal year, a mortgage in favor of The Royal Trust Co. has been placed upon the Granby property for the benefit of this company's bondholders, and in accordance with the deed of trust executed before Herbert M. Marler, notary, on October 9, 1906.

Some further transfers have been made by the shareholders of The Canadian Rubber Co., of Montreal, Limited, and there now remain only 904 shares outstanding, of which 45 shares are held by the directors.

During the year the necessary steps were taken to terminate the fiscal years of all the companies on December 31, and your directors believe that this course will commend itself to you as enabling them in the future to present to you, annually, statements for the full current year.

The individual statements of all the companies have been duly audited and when reduced to the basis of a financial year of twelve months show a total net profit at the rate of \$506,982.18 per annum, which exceeds the amount required to pay the interest on the company's bonds and the dividend on the preferred stock by \$311,870.18.

Total sales made by all the subsidiary companies aggregate \$6,659,598.81, showing a satisfactory increase for the year.

The general condition of the shoe trade has been quite satisfactory during the year, and from present indications it is believed that the year 1908 will show an acceptable increase in the business and earnings of your various companies.

It is with deep regret that your directors announce that owing to temporary illness your president and managing director, Mr. D. Lorne McGibbon, has applied for six months' leave of absence, which has been granted to him. Your directors feel that all the shareholders will join with them in wishing Mr. McGibbon a

speedy return to health. His labors in the interests of the company, from its inception to the present time, have been indefatigable, and the statement which is to be submitted to you at this meeting, and the present prosperous condition of all the subsidiary companies which this company controls, speak eloquently of the success which has attended Mr. McGibbon's efforts on behalf of the shareholders.

For the past year Mr. McGibbon's energies have been devoted to placing all the subsidiary companies on a thoroughly organized basis, and this has been accomplished so efficiently that the outgoing board feel that during Mr. McGibbon's enforced absence the only change which is necessary is to associate more closely with the active management of the company, Mr. J. H. McKechnie and Mr. James Robinson, members of the present board of directors, whose knowledge and experience in the rubber business is beyond question.

It is intended to appoint Mr. J. H. McKechnie, who for so many years managed the affairs of The Granby Rubber Co., Limited, second vice president, and Mr. James Robinson, who organized and made such a success of The Maple Leaf Rubber Co., Limited, chairman of the executive committee. Both these gentlemen have agreed to accept the positions offered to them and will give the present staff of this company and the subsidiary companies all the advice and assistance in their power.

JAMES ROBINSON, Chairman.

NEW RUBBER FOOTWEAR PRICES.

New lists on rubber footwear were issued by the Canadian manufacturers on March 2—practically the same date as last year. On the whole list prices are a trifle lower, though on a number of items no change has been made. Prices are all listed at even figures, in order to meet the views of the retailers, some of whom objected to the odd list prices heretofore in vogue. An item listed last year at 78 cents figures now at 80, or 93 is changed to 95, but in other cases there has been a decline. Similarly, when discounts are applied, there are fewer cases of fractions of cents appearing. The discount to retailers is 20 per cent. against 15@3 per cent. last year, 20 per cent. in 1905-06, and 17 per cent. in the year before that. The difference is that the retailer will now pay 80 cents for an article listed at \$1 instead of 82½ cents last year. A special discount of 5 per cent. is allowed on orders placed before May 1 and shipped before November 1, 1908. A similar discount for early orders was allowed during the two years preceding. Besides these discounts and the customary discount for cash, the manufacturers allow a bonus rebate, to be governed by the volume of orders given by the purchaser during the season, the bonus being payable April 10, 1909.

IT PAYS TO WEAR RUBBERS IN MONTREAL.

THE rubber trade in Montreal have been delighted by a decision rendered by Mr. Justice Bruneau in a suit for damages brought against that city by a citizen who slipped upon a defective sidewalk and was injured. The judge condemned the defendant to pay \$75 and costs of the action. He observed, however, that as the plaintiff was not wearing rubbers, he could not expect the indemnity to which he might otherwise have been entitled, as he looked upon this as negligence on his part under the circumstances.

The decision also was viewed with satisfaction at the Montreal city hall. There is snow on the sidewalks all winter, and slipping on them is by no means unusual. If neglect to wear rubbers is to be recognized as contributory negligence, the authorities feel that the city's position in the position of defending damage suits will be greatly improved.

In printing the above it is not intimated that it does not pay to wear rubbers outside of Montreal.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE warm spring weather now seems to make everything grow except business, judging from the reports concerning the condition of trade in San Francisco which the rubber merchants are giving out. It would appear from all indications other than what they actually say that business was fairly active; the same number of men are employed and there is the usual bustle and activity about the stores, and it may be that the spring weather alone is responsible for the listless statements which rubber men have been making about present conditions and the outlook. As Mr. Gorham said, when questioned as to the trade conditions: "I can't tell you anything about conditions. I have just eaten a big lunch, and I am not thinking of anything." Ordinarily after a big lunch a man is in his best humor for thinking up good things about his business, but stretchy warm spring weather makes a difference!

Throughout wholesale district, where most of the rubber houses are located, the board of health has posted notices in the stores requiring the tenants to keep the premises in a sanitary condition, and soliciting their cooperation in the war which has been declared on the rats. All of this is by way of assistance to the representative from the Government's health department, who has been sent here to give the city a thorough scrubbing, so that it will be in good shape when the Atlantic fleet arrives in May. There will be a great many sailor boys in San Francisco at that time, and as there have been rumors of bubonic plague in some of the ports of the Pacific coast, the authorities have started in to stamp out all breeding places of vermin.

The approach of spring has brought renewed activity in building and San Francisco has the appearance of being a very busy town. Tradesmen and mechanics find no difficulty now in getting employment. In many places where the mines were closed on account of a scarcity of funds work is being resumed, and mills are preparing to open. In the country districts conditions remain about the same, as the farmers have enjoyed prosperous seasons for several years, and they always get very satisfactory prices for their products. In commercial centers money is still a somewhat scarce article and business men are not reaching out for future possibilities quite as extensively as they might otherwise.

Mr. Bowers, of the Bowers Rubber Works, reports nothing out of the ordinary in business conditions. His firm are running along as usual, keeping their full force of men and running full time. "We do not notice much change in the business which comes in from the outside districts," he said. "It is not the country that feels this financial depression, any way. It is the big cities, which are the financial centers."

The new three-story brick building of the Revere Rubber Co.'s San Francisco agency, at Nos. 84-86 First street, is entirely completed, and fully equipped with stock and handling their regular business. The loss which the firm sustained in their recent fire did not interfere with their regular trade, and in their new quarters they are in a better position than before.

Mr. Kanze, of the Phoenix Rubber Co., reports that they are still doing their best work on their non skidding tires, which seem to be unusually adaptable to San Francisco. The firm has a new member, Mr. Overton, of the Union Fish Company, a man well known in business circles here.

Mr. Sargeant, manager of the Gorham Rubber Co., reports business gradually improving. This firm has recently sent out a man to cover Arizona and Mexico and to see that the Gorham company gets well established. Mexico is a new territory to the company, but many mines are being opened there and reports so far indicate a good business. The firm is also beginning to reach out for business on the west coast of South America.

The large new building which the Goodyear Rubber Co. will

occupy on Market street is all but completed and it will not be long before the company can once more get located in permanent and modern quarters.

The Pacific Mill and Mine Supply Co., on Fremont street, report that demands for belting have greatly increased lately and that prospects are bright for a good season.

Mr. Perkins, of the Sterling Rubber Co., states that the first of the month started out remarkably well and that he is much encouraged with the favorable turn of business.

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

NOTWITHSTANDING the labor trouble at the works of the Lambertville Rubber Co., at Lambertville, the company are now operating their plant practically on full time, and with a force nearly equal to that employed before the shut down. It is said that only the general business depression prevents the company from increasing the force of workmen to even larger proportions. No appreciable depression has as yet been felt by the company, and its traveling men report sales as excellent. The entire boot and shoe force is kept filling orders, instead of making reserve stock, as is generally done at this time of the year. It is understood that since January 1 their shipments of boots and shoes have made an unprecedented record for these months. It is probable that about 60 per cent. of the present force are the old workmen, many of the union men having returned. Most of the girls in the overshoe department are at work as before. The scale of wages remains about as before the trouble. The Lambertville local of the Rubber Workers' Union maintains its organization, but apparently is neither active nor strong. Many of those remaining out have obtained positions elsewhere.

Justice Alfred Reed has handed down an opinion in the supreme court at Trenton in favor of James D. Brady, formerly of the Standard Rubber Co., of that city, and others, in the suit instituted against them by the United and Globe Rubber Manufacturing Co.'s, also of Trenton. The suit was brought to recover on a bond for \$6,000 given to the United and Globe companies by Brady and the other defendants to secure a debt owed to the complainant companies. The defendants demurred to the declaration filed by the United and Globe companies upon the ground that the Standard Rubber Co. should have been made a party defendant to the suit. The opinion of Justice Reed is to the effect that the non-joinder of the Standard Rubber Co., a necessary party defendant, gives proper ground for a demurrer. Judgment is therefore given for the defendants upon the demurrer, with leave to the United and Globe companies to amend their declaration and re-open the case.

Frank Hand, James Mooney, Leonard Stover, and George Barnett, boys living near the works of the Empire Rubber Manufacturing Co., were placed in the custody of a probation officer March 6 on the charge of stealing copper wire, as a result of a hearing in the Central police court. The Empire company had been missing copper wire for some time and on March 5 the boys were caught fishing a quantity of wire from the Assana pink creek in the rear of their works. They denied any theft at the Empire mills, but confessed to stealing wire from the Pennsylvania Railroad Co.

James D. Brady has severed his connection with the Standard Rubber Co. and has accepted a position as traveling salesman for the Trenton Rubber Manufacturing Co. He will cover New York state.

The Empire Rubber Manufacturing Co., in the second trial of their suit against Morris & Co., of Groveville, N. J., manufacturers of duck, were awarded a verdict of \$5,568.91, on March 18, by a jury in the Mercer supreme court. The case was first heard before Justice Alfred Reed in the supreme court several months ago and a verdict was given for the Empire company.

That concern, however, held that the verdict awarded was insufficient to cover the damages, and an appeal was taken to the court of errors and appeals. After hearing argument the latter court ordered a new trial.

The rubber company claimed that on July 10, 1903, they entered into a contract with Morris & Co., under which the latter were to furnish duck to the former at a specified price. The Empire company alleged that after some of the duck had been delivered the price of the raw material advanced and Morris & Co. failed to keep the contract. The complainant company averred that owing to this failure they were forced to buy duck in the open market and pay a much higher price for it. The suit was brought to recover the alleged loss, the total amount claimed being \$6,804.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

BUSINESS conditions evidently are improving. "Our sales during the months of February and March were greater than those made during the same months a year ago," said one of the officers of the Diamond Rubber Co. From the sales departments of the other Akron companies come similar reports. The demand for rubber goods, and especially tires, has been growing steadily since the first of the year. During the dull months of the past winter the various concerns, rather than lay off their employes, did not stop manufacturing their products until their warehouses were full. Now they are cutting down this surplus stock before resuming operations in full. But at all of the plants employes are being taken back every day, and from present appearances it will be but a comparatively short time before conditions will have reached the normal stage.

At the plant of the Firestone Tire and Rubber Co. all of the old employes are working full time. A night shift was put on during March. The secretary of the company announces that the sales for March are larger than a year ago.

The Adamson Machine Co., the incorporation of which was reported in the last issue of this paper, to succeed to the rubber machinery business of A. Adamson, has been organized with the election of Alexander Adamson, president and general manager; W. E. Slabaugh, vice president; R. B. Koontz, secretary; and C. J. Gilletly, treasurer. The incorporation of the company will in no way change their general business, except that it is their purpose to erect a new plant on a site of 5 acres recently acquired, and for which plans are now under consideration.

The Swinehart Clincher Tire and Rubber Co. have begun a suit in the United States district court against Frank F. Tillotson, cashier of the Citizen's Savings Bank of Detroit. Tillotson is charged with using a tire made by the Motz company, which infringes upon the Swinehart concave patents.

The Swinehart company are meeting with success in the manufacture of their adjustable and quick detachable truck tires and rims. They are something of a novelty in equipment for vehicles using solid tires, and a decided improvement over former attempts along this line.

The Diamond Rubber Co. have not yet entered extensively upon the manufacture of insulated wire, although orders are being received and filled in considerable quantities. It will probably be several weeks before this new department of the plant will be operated upon as extensive scale as has been contemplated.

The Akron Toy Co., consisting principally of members of the Swinehart Clincher Tire and Rubber Co., are manufacturing outfits for the game of Diabolo. Already the sales are reported as being unexpectedly large.

The leading Akron manufacturers of rubber tires will be represented prominently in the automobile carnival to be held in New York the first week in April.

SOUTH AMERICAN INTERESTS.

PROPOSED RUBBER LEGISLATION IN BRAZIL.

A BILL has been introduced in the Brazilian congress authorizing the government to grant a premium of 50 contos [= about \$15,000] to any one who shall invent an economic process for the extraction of rubber without causing injury to the trees, and for its prompt coagulation. To encourage the establishment of rubber manufactories in Brazil, the bill also grants to the first five rubber factories which within two years are established in the Acre territory and in the states of Amazonas, Pará, Bahia, São Paulo, and Rio de Janeiro exemption from the payment of import duties for a period of five years on all material and machinery imported for said mills.

THE COMING BRAZILIAN EXPOSITION.

MAJOR J. ORTON KERBEY, for some years United States consul at Pará, after which he traveled extensively in South America, and especially in the rubber region of the Amazon, about which he has written extensively, will be in attendance at the National Brazilian Exposition of 1908, to be held in Rio de Janeiro from May to December, inclusive. Major Kerbey will most likely, while in Brazil, revisit the rubber regions in the north, keeping in mind the collection of material for another book that he has in prospect. He is now connected with the International Bureau of American Republics, at Washington.

Better facilities for reaching Rio from the United States exist than formerly, and the management of the exposition will attempt to secure a large attendance from the northern republic as a means to bringing about closer relations between the people of the two countries.

Not a little interest has been expressed in the scientific expedition organized lately in Boston for exploring the southern watershed of the Amazon, under the leadership of George M. Boynton. It is planned to begin at Pernambuco in July next, and to devote five years to the work. The party starts with 35 members. No doubt they will add considerably to the existing stock of knowledge of the Brazilian rubber regions.

AN OVERWHELMING RESULT.

THE president of the esteemed Amazon Trading and Development Co. (Cleveland, Ohio) on March 7 took his pen in hand to write a few lines to his friends to advise that Mr. J. W. Ranger, of New York city, had just purchased \$100,000 of the stock of the company, "which means a great deal more than that simple statement might convey under ordinary circumstances." Likewise, Mr. Ranger "has also secured several blocks of this stock for his immediate friends." Furthermore, \$500,000 of the stock has been placed with an English syndicate. President Ewing writes among other things: "We began the sale of our stock on the tenth day of January and at once mailed out our prospectus; the result has been what you might call overwhelming: people have grasped the possibilities and realized a number of things." The company will not be surprised if their dividends should be double the par value of the stock every year, which is not so bad, considering that "this is not a speculative business." There is no record of any rubber having reached New York from the company's headquarters at Egos. P. S.—There is not much record of Egos.

SAMPLES of Pará rubber from the government plantations at Mergui, Burma, sent lately to London for examination were reported to compare favorably in composition and physical properties with samples of Pará rubber from Ceylon and Malaya.

FOLLOWING a fire in Pittsburgh, said to have resulted from the bursting of a rubber hose connecting a gas pipe and a small stove, the authorities have taken the stand that the use of such devices is fraught with danger, and a city ordinance has been proposed prohibiting the use of rubber tubing for the purpose referred to.

News of the American Rubber Trade.

UNITED STATES RUBBER CO.'S NEW FUNDING NOTES.

THE United States Rubber Co., during the past month, arranged for the refunding of their \$8,000,000 of 5 per cent. gold note indebtedness, by the issue of a like amount of notes due September 15, 1900. The new notes were offered for subscription at 97 $\frac{1}{4}$ and interest, to yield 7 per cent. on the investment. They are secured by the deposit with the trustee of notes of the subsidiary companies, aggregating \$12,000,000. The trust agreement provides that the United States Rubber Co. shall not create any mortgage debt while these notes remain outstanding, and that the net cash assets shall at no time be of less value than \$15,000,000 over and above all indebtedness, except the funding notes.

The treasurer of the company states that "as of December 31, 1907, the net cash assets of the United States Rubber Co. and subsidiary companies, including its proportion of the net cash assets of the Rubber Goods Manufacturing Co., were \$24,299,000 over all liabilities other than the funding notes. The net earnings of the United States Rubber Co. for the year ending March 31, 1907, over all interest charges were \$4,590,382, including only \$689,308 of the Rubber Goods Manufacturing Co.'s profits of \$2,004,484. For the nine months ending December 31, 1907, the net earnings of the United States Rubber Co., and its proportion of the net earnings of the Rubber Goods Manufacturing Co., were over \$4,000,000, after the payment of all interest charges."

The funding notes of the United States Rubber Co. were first issued in 1902, being secured by a collateral indenture dated March 15. [The details of this arrangement appeared in full in THE INDIA RUBBER WORLD, May 1, 1902—page 245.] The balance sheet of the United States Rubber Co. for the year ending March 31, 1902, showed a deficit of \$1,110,344.15. No dividends had been declared during the year. The president in his annual report for that year stated: "The existence of a large floating indebtedness from the very inception of the United States Rubber Co. has been a menace to a thorough economic and independent administration of its affairs, and its funding has placed the company in a stronger and more secure position than ever before."

The notes first issued matured on March 15, 1905, by which time \$4,000,000 had been acquired and the remaining \$8,000,000 were renewed. It will be seen that the notes last issued run for only 18 months, instead of three years, as was the case with the earlier issues. Meanwhile the condition of the company has been vastly improved, as is indicated by the fact that the surplus reported on March 31, 1907, after the payment of large dividends, was \$6,126,706.44. The new notes were sold to Blair & Co. and the First National Bank, of New York, and Kidder, Peabody & Co., of Boston. The trustee is the Morton Trust Co., of New York.

The annual meeting of the United States Rubber Co. occurs this year on May 19.

The financial editor of the New York Sun, apropos of a recent snowstorm, said: "Years ago when every heavy rain or snow storm was made the basis of a movement in the United States Rubber stocks, weather such as yesterday would have sufficed for a rise in these issues of a couple of points at least. But the reverse happened, and on the sale of a few hundred shares Rubber common declined nearly 2 points. It would be interesting to know what the old speculative crowd think of what they must regard as a wasted opportunity. The last few years has certainly witnessed the cleaning up of a lot of the old time speculative counters."

RUBBER GOODS DIVIDEND.

THE thirty-sixth regular quarterly dividend of 13 $\frac{1}{4}$ per cent. on the preferred shares of the Rubber Goods Manufacturing Co. was payable on March 16 to holders of record March 7.

Among the securities sold at a public auction in New York on March 11 were \$24,500 in first mortgage 6 per cent. gold bonds of the Mechanical Rubber Co., at 102 $\frac{1}{8}$ @102 $\frac{1}{4}$. These bonds are a part of the issue of \$2,500,000, in 1893, a considerable part of which has now been retired. The Mechanical Rubber Co. was the first combination of mechanical rubber goods factories in this country, and served as the nucleus for the larger combination known as the Rubber Goods Manufacturing Co., both of which organizations were formed largely through the activity of Charles R. Flint.

THE RUBBER FOOTWEAR FACTORIES.

ALL the boot and shoe factories of The United States Rubber Co. were closed during the latter part of the past month, for the annual stocktaking and general repairs, in view of the ending of the fiscal year on March 31. At the New Jersey mill extensive repairs are being made, and at the factories of the Woonsocket Rubber Co. and the National India Rubber Co. new engines will be installed. THE INDIA RUBBER WORLD is advised that at the other mills necessary repairs will be made, and operations in all of them resumed as early in April as is consistent with the repair work in hand. The Fells factory of the Boston Rubber Shoe Co. closed on March 21, to resume work on April 6. The Edgeworth factory closed on March 18 and the time for reopening has not been announced. The Goodyear Glove factory at Naugatuck closed on March 14 for two weeks. Generally, however, the dates for resuming work have not been announced.

A TIRE INFRINGEMENT SUIT.

A SUIT in equity was filed March 5, 1908, in the United States circuit court at Hartford, Connecticut, against the Hartford Rubber Works Co. by the Metallic Rubber Tire Co., of Jersey City, New Jersey, alleging infringement of United States patent 609,320, which relates to the principle of a metal studded leather tread for rubber tires. The Metallic Rubber Tire Co. was incorporated in New Jersey March 14, 1899, and early in 1906 issued a circular stating that their counsel had been directed to bring suit against users of a number of non skidding tires, claiming infringement of patents granted to Calvin Thayer Adams and others, dating back to 1898. The Metallic Rubber Tire Co. at one time exhibited their goods extensively at the bicycle and motor shows, but do not appear to have been active of late.

PROFITS OF THE MACKAY COMPANIES.

THE annual report of The Mackay Companies for the year ended February 1, 1908, states that the corporation owns the whole or part of the capital stock of 102 prosperous cable, telegraph, and telephone companies in the United States, Canada, and Europe, including all the capital of the Commercial Cable Co. and the Postal Telegraph system, besides being by far the largest stockholder in the organization commonly known as the Bell Telephone Co. The income of The Mackay Companies during the year was \$3,830,390.38; dividends paid, \$3,655,216; expenses of administration, \$22,250.91; balance carried forward, \$152,923.47. The preferred shares issued to date amount to \$50,000,000 and the common shares to \$41,380,400.

RUBBER FACTORY AT RUTHERFORD SOLD AGAIN.

THE receivers of the Electric Rubber Manufacturing Co. (Rutherford, New Jersey), which company made an assignment at the end of 1906, after having made a sale of the property in June last, resumed possession of the same. Recently they received an offer for the purchase of the company from Albert Freeman, and on March 11 the receivers were directed by the chancery court of New Jersey, at Jersey City, to adopt the offer. Mr. Freeman is president of the Trident Tire Co., No. 1593 Broadway, New York.

THE RUBBER TRADE DIRECTORY.

THERE has been issued from the offices of THE INDIA RUBBER WORLD a Rubber Trade Directory for the United States, containing lists, by states and cities, of rubber goods manufacturers and distributors of such goods, the whole filling a substantial volume of nearly 300 pages. This work has been brought out in response to many requests for such a book of reference, and the publishers feel complimented by the favorable reception which the first issue has met. A letter from one of the most important rubber manufacturing companies in the country says:

"We wish to congratulate you upon the many excellent features which this book contains, and we believe that it is a publication which will be highly valued by the trade, especially so as its usefulness becomes more widely appreciated."

The publishers hardly hoped, in their first attempt, to score 100 in respect of either fullness or accuracy, and will welcome any suggestions which may tend to render a subsequent edition more complete in any respect.

RUBBER EMPLOYEES' ENTERTAINMENT.

THE fourth annual euchre and reception of the Gutta-Percha and Rubber Manufacturing Company Employees' Mutual Aid Association, at Arion Hall, Brooklyn, on the evening of March 3, was largely attended and proved a successful and enjoyable affair. This association was organized February 1, 1897, with a membership of 140, which has grown gradually to 250. Any employe of the company between the ages of 18 and 45 is eligible for membership. The initiation is \$1 and the dues 10 cents per week, with \$1 per year for medical services. The sick benefit is \$5 per week and \$100 is paid on the death of a member or \$50 on the death of a member's wife. The association has paid out over \$16,000 in benefits and now has over \$1,000 in the treasury. The officers are: William T. Shoup, president; John T. Applegate, vice president; Daniel H. Moore, treasurer; John Phalen, financial secretary; Oliver H. Penrod (No. 108 Stockton street, Brooklyn), recording secretary; Robert Nabet, sergeant at arms.

QUICK WORK AT THE DAVIDSON RUBBER FACTORY.

JUST before shutting down at 6 o'clock on February 20 the Brown engine at the Davidson Rubber Co.'s works met with an accident that broke both cylinder heads, cracked the cylinder and frame, and broke off the crank pin. The extent of the injury was such as to require a new engine, with the exception of the flywheel and shaft. The old engine had been doing first class service for years and the accident was due to no fault in design or construction. Mr. A. M. Paul, the president of the company, took immediate steps to replace the broken engine, and in the meantime keep the works running. A small Sturtevant engine was set up and connected to all the shafting it was able to drive on the two lower stories. A motor was installed to drive the two upper stories, the current for it being furnished by the Davidson company's electric lighting plant. These temporary installations furnished power to all departments except the mills and calendars. After looking over the engine field, a contract was placed with the Ley Construction Co. (Springfield, Massachusetts), for the installation of a new Allis-Chalmers engine, the removal of the old engine, and such changes in piping and foundations as were necessary to accommodate the new engine. The new engine has a 20 inch diameter cylinder and 24 inch stroke. It is a Reynolds-Corliss, girder frame and was shipped, without shaft or flywheel, by express from Milwaukee on March 3. This express shipment weighed about 20,000 pounds and was a record breaker of its kind. The foundations were in readiness to receive the engine on its arrival and on Monday morning, March 9, at 7 o'clock, the engine went into service and the mill room was again running to full capacity. In spite of this accident the works were not shut down at all and the time lost in the mill amounted to only eleven working days. The Ley Construction Co. left nothing undone to hasten the completion of their contract and fin-

ished it in a week less than their contract time, thus gaining a bonus for anticipated completion. Their engineer, Mr. Carey, was in attendance on the work, day and night. John O. DeWolf & Co., of Boston, were consulting engineers for the Davidson Rubber Co.

MR. JEFFERY COMES TO HIS OWN AGAIN.

THE receivers of the Pope Manufacturing Co. have sold to Thomas B. Jeffery, of Kenosha, Wisconsin, what was formerly the "Rambler" bicycle factory, in Chicago. The plant was that in which the Gormully & Jeffery Manufacturing Co. originated and conducted for so many years the manufacture of the "Rambler" brand of bicycles. It was taken over in 1899 by the American Bicycle Co., which in turn was succeeded by the Pope Manufacturing Co. The same management originated—so far as America is concerned, at least—the type of tire known as the "G & J," which is still protected by patents issued to Mr. Jeffery.

AN ALLING RUBBER STORE IN NEW YORK STATE.

A RUBBER store is being opened at Schenectady, New York, under the style of Alling Rubber Co., which is a new company with Noyes E. Alling president and Wilford C. Minor secretary and treasurer. Mr. Minor has been local manager of the Alling Rubber Co. at Waterbury, Connecticut, in which position he will be succeeded by A. T. Jones. The new store is intended ultimately to be connected with the Alling Rubber Stores syndicate, of which there are already 12 branches in Connecticut, Massachusetts, and New Jersey.

NEW GARLOCK PACKINGS.

THE Garlock Packing Co. (Palmyra, New York) have recently taken out some new patents on various types of packing, including rubber backed flax and rubber backed hydraulic packings. The company are also putting out a new combination fibrous and asbestos sheet packing, which is referred to as being adapted especially to high pressure and superheated steam flange lines. The Garlock company maintain a domestic traveling force of more than 200 men in addition to taking care of large amount of business by means of agencies throughout the United States and several abroad.

BISHOP GUTTA-PERCHA CO.'S ANNUAL.

AT the recent annual meeting of shareholders of the Bishop Gutta-Percha Co. (New York) these were elected directors: Henry A. Reed, Ellen I. Anderson, W. Boardman Reed, Henry D. Reed, and Louis F. Reed. The officers were reelected: Henry A. Reed, president; Henry D. Reed, vice-president; W. Boardman Reed, treasurer; Louis F. Reed, secretary.

TRADE NEWS NOTES.

THE Trenton Rubber Manufacturing Co. (Trenton, New Jersey) have just equipped an up-to-date laboratory, which they have put in charge of a competent chemist.

The rubber department of George Borgfeldt & Co. (New York) carries a varied line of hard and soft rubber goods produced by the Vereinigte Gummiwaaren-Fabriken Harburg-Wien, and by the factory of Fr. M. Daubitz, at Rudow-Berlin. The firm of Borgfeldt under the present style is now in its twenty-eighth year, but the business is really considerably older, having been founded by the late Mr. Borgfeldt in 1865.

The Republic Rubber Co. (Youngstown, Ohio) are referred to as having received an important order for rubber hose and connections for use in the construction of the Panama canal.

A sweet persuader "sent to lead you to some people who want orders" is "Sally," an heiress—that is, "she has a clear title to a mint of suggestions (all Goodrich rubber)." In other words, she is one of the Goodrich beauties in color sent to a few friends free, and "to appreciative strangers, 75 cents postpaid."

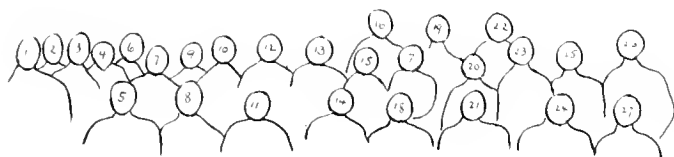
Frank W. Whitcher Co. (Boston) were awarded a medal at the Jamestown Tercentennial Exposition for their "Velvet" rubber heels.



OFFICE FORCE OF THE BOSTON RUBBER SHOE CO.

BOSTON RUBBER SHOE CO.'S OFFICE FORCE.

By the time the illustration on this page catches the eye of the observant reader, the Boston office of the Boston Rubber Shoe Co., in the well known Converse building, will be a thing of the past. As an historical record, therefore, this picture is of special value, as it gives a view of the entire office force at the time of the removal to their new quarters in Boston. Many pleasant things could be said of each individual in this group, and many too of the office force as a whole, and the picture will call them all to mind.

**KEY TO THE GROUP ABOVE.**

- | | | | |
|-------------------|------------------|---------------------|-------------------|
| 1. Mr. Ballard. | 8. Miss Tingley. | 15. Mr. Dewing. | 21. Mr. Leland. |
| 2. Mr. Solbery. | 9. Mr. Jones. | 16. Mr. Norris. | 22. Mr. Walsh. |
| 3. Miss Kenah. | 10. Miss Lynch. | 17. Mr. Palmer. | 23. Mr. Babcock. |
| 4. Mr. Wilson. | 11. Miss Wales. | 18. Mr. Converse. | 24. Mr. Cummings. |
| 5. Miss Hadley. | 12. Mr. Reilly. | 19. "Tony" Shepard. | 25. Mr. Dorri. |
| 6. Mr. Phipps. | 13. Mr. Harding. | 20. Mr. Hill. | 26. Mr. Abbott. |
| 7. Miss Bengtson. | 14. Mr. Ryder. | | 27. Mr. Estey. |

THE NEW YORK FIRE DEPARTMENT.

On another page of this paper are the details of contracts awarded during the past month for new hose for the fire department of New York city. Satisfactory bids for one of the items of hose at first advertised for not having been received, a new advertisement was published, for bids on supplying 20,000 feet of 3 inch 5 ply rubber fire hose, for the borough of Manhattan, to be opened on March 18. This advertisement was withdrawn, however, on account of the death of Hugh Bonner, the fire commissioner.

Mr. Bonner died on March 13, in his sixty-ninth year, after having served as head of the department for only about a month. He had been connected with the service, however, for most of the time since 1850, and was for a long period chief. He is generally credited with having contributed more than any other one man toward placing the force upon a high plane of efficiency.

Nicholas J. Hayes was appointed fire commissioner on March 20. He had previously filled that office for two years, under

Mayor McClellan's first administration, and is considered to have made a good record.

The city authorities have definitely appropriated \$130,000 for new hose for the borough of Manhattan and \$70,000 for Brooklyn, in addition to a general appropriation for hose at the end of January, making \$250,000 since the beginning of the year. The item of 20,000 feet of hose mentioned in a preceding paragraph has been advertised again.

TRADE NEWS NOTES.

THE Electric Cable Co. (New York), whose plant at Bridgeport, Connecticut, was partially destroyed by fire on February 18, are planning to rebuild on a larger scale. A portion of the old plant, which was not seriously injured, has been running since the fire.

Mr. H. H. Holland, of London, the European agent for the United States Rubber Co., was in New York and Boston recently, on his annual visit to the States, in connection with the business which he represents. It is understood that whereas little "rubber" weather was experienced in England during the past winter, conditions for selling galoshes were especially favorable in Norway and Sweden.

The Hartford Rubber Works Co. have discontinued their Pacific coast branches and appointed the Chanslor & Lyon Motor Supply Co. as their agents in California, Nevada, and Hawaii for the Hartford line of tires. C. H. Minto, who was Pacific coast manager for the Hartford company, has been retained by the Chanslor & Lyon company.

I. Goldberg, formerly connected with the waste rubber trade in Boston as a member of the firm Goldberg & Rathman, has opened a new house in that trade as I. Goldberg & Co., at Nos. 6-10 Storer street, in that city.

The tires on the taxicabs operated by the New York Transportation Co. are equipped with Dow nondeflation inner tubes, which are reported by the transportation company to be giving absolute satisfaction. The Dow Tire Co. (No. 104 West Forty-second street, New York), who make these tubes, are understood to be figuring on supplying them for use on the vehicles of several other important services in New York and other cities.

Samuel G. Rigdon, known to the rubber tire trade for a number of years as an active and successful traveling man, has become the general representative of the Republic Rubber Co. (Youngstown, Ohio.)

AFFAIRS OF THE ELECTRICAL COMPANIES.

The report of the Western Electric Co. (Chicago) for the year ended November 30, 1907, shows net earnings on sales of \$1,217,000. Dividends of 8 per cent., amounting to \$1,217,000 were declared. Sales for the fiscal year amounted to \$52,724,168, compared with \$69,245,332 for the previous year, a decrease of 23.9 per cent. The financial condition of the company has been well cared for, and at the end of the year the book value of capital shares figured out at \$225.21.

The report of the General Electric Co. for the year ended January 31, 1908, to be issued in May, will show it is reported, gross orders billed to customers of approximately \$700,000,000, and net earnings for dividends on the \$65,067,100 capital of about \$9,800,000, or 15 per cent. The share earnings in the previous fiscal year were \$8,427,842, equal to 13.2 per cent. on the \$63,572,800 stock outstanding at the end of that year. The company have adopted a policy of reducing prices on electrical apparatus, as the surest way of maintaining their position in the electrical field.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending March 21:

COMMON STOCK.

Week Feb. 20	Sales 1,455 shares	High 10 1/8	Low 17 1/2
Week March 7	Sales 475 shares	High 10 1/4	Low 18
Week March 14	Sales 2,900 shares	High 21 1/2	Low 19 7/8
Week March 21	Sales 9,900 shares	High 22	Low 19 1/4

For the year—High, 26, Jan. 14; Low, 17 1/2, Feb. 26.
Last year—High, 52 1/2; Low, 13 1/2.

FIRST PREFERRED STOCK.

Week Feb. 20	Sales 1,720 shares	High 70 1/2	Low 77 1/2
Week March 7	Sales 1,501 shares	High 78 1/2	Low 77
Week March 14	Sales 1,000 shares	High 85	Low 78 1/4
Week March 21	Sales 1,210 shares	High 85	Low 83

For the year—High, 88 1/2, Jan. 6; Low, 70, Feb. 10.
Last year—High, 100 7/8; Low, 60 1/4.

SECOND PREFERRED STOCK.

Week Feb. 20	Sales 135 shares	High 45	Low 45
Week March 7	Sales 125 shares	High 45	Low 45
Week March 14	Sales 655 shares	High 50	Low 50
Week March 21	Sales 100 shares	High 50	Low 50

For the year—High, 60 1/4, Jan. 23; Low, 42, Feb. 21.
Last year—High, 78 1/8; Low, 30.

NEW INCORPORATIONS.

FRANK W. WHITCHER Co., January 16, 1908, under the laws of Massachusetts; capital authorized, \$250,000. The directors are Frank W. Whitcher, Frederick R. La Gallee, Stephen R. Nichols, and Sanford Crandon, Jr., all of No. 14 Albany street, Boston, and William M. Harriman, of Chicago. This corporation acquires the shoe findings business founded in Boston in 1826 by John Tillson and continued under various names, and since 1893 as Frank W. Whitcher & Co. There is really no change in management involved. The house of Whitcher has taken important rank in its rubber heel business.

Monroe Rubber and Metal Co., January 22, 1908, under the laws of New York state; capital, \$7,000. To deal in rubber and other waste, at Rochester, N. Y. Incorporators: Abraham E. Hork, Morris Rosenblum and Wolf Miller.

The Hudson Rubber and Tire Co., March 2, 1908, under the laws of New Jersey; capital authorized, \$100,000. The object is to manufacture rubber tires. Richard Shippen is president; August H. Petersen, vice-president, and Edward Shippen II, secretary and treasurer, and the head offices at No. 1121 Clinton street, Hoboken, N. J.

Leakless Motor Tube Co., February 10, 1908, under the laws of New York; capital, \$60,000. To make a compound for sealing tire punctures. Incorporators: Edmund S. Hopkins (No. 17 Battery place), S. K. Albright, and C. H. Bennett, all of New York city.

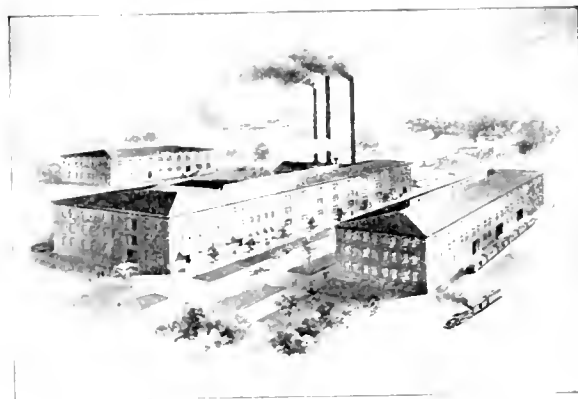
White Auto Tire and Rubber Co., February 4, 1908, under the laws of Illinois; capital, \$50,000. Incorporators: E. P. White, C. C. Bartlett, and William W. Smith, represented by Morrison,

Rost & Smith, attorneys, of No. 22 Fifth avenue, Chicago. Mr. Smith is at present secretary and treasurer of the corporation.

General Tire Repair Co., March 13, 1908, under the laws of New York state, capital, \$2,000. Incorporators: Charles W. Rehmann, Joseph W. Rehmann, and John F. Rehmann, all of No. 220 West Forty-eighth street, New York.

THE RUBBER FACTORY AT BATAVIA.

THE Sweet Tire and Rubber Co. (Batavia, New York) are now making a general line of mechanical goods and mold work, in addition to their regular output of automobile tires and inner tubes. They are making wrapped tread tires, called the "Batavia



PLANT OF THE SWEET TIRE AND RUBBER CO.

clincher," as well as a bevel edged tire protector. One of their specialties is the "Genesee" red sheet packing. The management is in the hands of Mr. George E. Perrine, who is secretary and treasurer of the company.

TRADE NEWS NOTES.

THE directors of the Boston Woven Hose and Rubber Co. have declared a semi annual dividend of \$4 per share on the common stock, payable March 16, 1908, to holders of record March 5.

The Tremont Rubber Co., of No. 218 Congress street, Boston, who have been engaged hitherto in handling rubber footwear, have organized a department for the sale of mackintoshes, rain-coats, and oiled clothing.

Morgan & Wright (Detroit, Michigan) have added to their line a corrugated motorcycle tire of the detachable double clincher type, with a casing formed to fit the rim, instead of being flat, as is usual. The inner tube is made of several instead of one ply of rubber.

Jacob Pollikoff, a dealer in scrap rubber at No. 18 First avenue, New York, since December, 1904, had filed a petition in bankruptcy, with liabilities \$6,818 and nominal assets \$2,900.

The directors of the Corn Products Refining Co. on March 17 declared the regular quarterly dividend of 1 per cent. on the preferred stock and an extra dividend of 1 per cent., instead of 3, making 5 per cent. instead of 7 per cent., as usual, for the fiscal year. The dividend is 7 per cent. cumulative. This is stated to be due in part to the unexpected outlay made necessary by the new food laws, which item amounted upward of \$500,000.

The directors of the General Electric Co. have declared their regular quarterly dividend of 2 per cent., payable on April 15.

S. B. Thing & Co., of New York, who handle the Hood brands of rubber, are referred to as having made an addition of 347 new accounts to their books during the season now closing.

The Diamond Rubber Co.'s branch at Pittsburgh, Pennsylvania, has been removed from No. 16 Wood street to a new store, designed especially for their use, at No. 6122 Centre street.

The Hayes Rubber Co., of No. 57 Warren street, New York, is a new company formed to handle tires and automobile accessories. It is headed by Frank P. Hayes, who has been active in the rubber tire trade in New York for several years.

HARDMAN RUBBER CO.—SALE OF PLANT.

THE receiver for the Hardman Rubber Co. (Belleville, New Jersey), who advertised for bids for the plant of that company to be opened on March 14, failed to effect a sale of the property as a result. Later, however, a bid was received for the entire machinery and equipment from John E. Van Duke, as agent, and the court of chancery ordered that the creditors of the company should show cause before that court, at Newark, on March 31, why the bid should not be accepted. The intending purchasers are understood to be thoroughly acquainted with the rubber industry, and to be in a position to consider propositions from persons prepared to invest additional capital in a modern and well equipped going plant.

ORIENTAL RUBBER CO.—ASSIGNMENT.

DOMINGO M. MONJO, of Elizabeth, New Jersey, president of the Oriental Rubber Co., has brought a suit in the New Jersey court of chancery at Trenton for the appointment of a receiver for the company. He claims the company is bankrupt and that for some time the business has been conducted at a loss. Following the filing of the bill, on March 23, Vice Chancellor Howell made an order appointing Frederick R. Moddock, of Newark, receiver for the concern. The company is capitalized at \$125,000 and the present directors are Otto H. C. Arendt, Edward A. Monjo, and the complainant. The bill says that the company owes President Monjo \$5,100 and has no ready money to continue the business. It is further shown that it has been compelled to lay off many of the employes. According to the bill the assets aggregate \$71,300, as follows: The plant on Searing street, Newark, \$52,000; stock and manufactured goods on hand, \$13,000; book accounts, \$6,100; cash, \$200. The liabilities are given as follows: Mortgage on plant, \$6,000; bills payable, \$11,500; accounts payable, \$11,000; debts for money loaned and advanced, about \$6,500.

TRADE NEWS NOTES.

MR. E. P. CAMP has been appointed manager of the New York branch of the Cincinnati Rubber Manufacturing Co., at No. 136 Liberty street. He is well acquainted with the trade in New York and its vicinity, through his connection hitherto with the Voorhees Rubber Manufacturing Co.

The 10,000 employes of the General Electric Co. (Schenectady, New York), it is reported, after having worked for some two months four hours a day, are about to go on full time. This indicates that the insulated wire department, as well as the others, is well supplied with orders.

MR. ARTHUR W. STEDMAN, of George A. Alden & Co., Boston, and president of the New England Rubber Club, has been very ill with pneumonia at the Seapoint Club, Hyannis, Massachusetts, where he went for a few days' rest. Through the constant and skillful care of his cousin, Dr. J. C. Stedman, he has been pronounced out of danger and well on the road to recovery.

The annual meeting of the shareholders of the Rubber Goods Manufacturing Co., a corporation under the laws of New Jersey, will be held at noon on Thursday, April 9, at the registered office of the company, in Jersey City.

There is probably no better known man in the waterproof clothing trade than Charles F. Hamilton, his beginnings as a marketer of his special lines occurring back in 1883, when he sold gossamers for the Standard Rubber Co. Later, it will be remembered, he was with the Gossamer Rubber Clothing Co., and still later the Goodyear Gossamer Rubber Co., which, in 1887, became the Apsley Rubber Co. In all these years he was accounted one of the most brilliant and popular salesmen in his line. It will probably interest his friends to know that, to use a stock expression, he has "quit the road" to take charge of the business of the Rubber Manufacturing and Distributing Co., now opening a store in Spokane, Washington.

PERSONAL MENTION.

THE trade will be glad to learn that W. H. Lockwood, formerly treasurer of the Davidson Rubber Co., has returned after spending the winter in the South fully recovered in health.

MR. S. H. C. MINER, hale and hearty with the flush of health on his cheeks and his gray eyes alight with energy and purpose, spent two weeks in March in the city of Boston, where he has large interests. He is planning to move from his winter home in Montreal (the Windsor Hotel) to his home in Granby about the first of May.

OF the guests at the New England Rubber Club dinner on March 11 was a notable contingent from the Pacific coast, numbering Mr. Richard H. Pease and his son, of the Goodyear Rubber Co., and Mr. H. C. Norton, vice-president and manager of the Pacific Coast Rubber Co., all from San Francisco, and Mr. Franz Richter, of the Washington Rubber Co., of Seattle, Washington.

When General Taylor, at the New England Rubber Club dinner, was describing some financial deals between Jay Gould and Tom Scott, and incidentally having fun with the memory of both of these magnates, he was unaware that a valued member of the New England Rubber Club, called by a few of his intimates "Scotty," a grandson of the second named gentleman, sat directly in front of him and if one could judge by his broad smile, enjoyed that part of the entertainment as much as anybody.

THE Hon. L. D. Apsley is justly proud of the fact that he was bidden to Lockhaven, Pennsylvania, on March 12, to celebrate the birthday of his father, Mr. George Apsley, who is 90 years old and still in active business.

Colonel Harry E. Converse, president of the Boston Rubber Shoe Co., is spending a few weeks on the Pacific coast.

Messrs. George A. Lewis, president, and La Vete C. Warner, superintendent, of the Beacon Falls Rubber Shoe Co., were recently enjoying a vacation at Camden, South Carolina.

MR. D. LORNE MCGIBBON, president of the Canadian Consolidated Rubber Co., on account of impaired health, has applied for and received a six months leave of absence, which he intends to

F. F. SCHAFER, superintendent of the factory of the Goodyear's India Rubber Glove Manufacturing Co. (Naugatuck, Connecticut), was recently on a vacation at Camden, South Carolina.

MR. A. M. STICKNEY, president of the Wellman Co. (Medford, Massachusetts), who since his recovery from pneumonia has suffered considerably from a bronchial difficulty, has gone South, his trip embracing Nassau and southern Florida. His many friends the world over wish him a speedy recovery, which a warmer climate and his wonderful constitution should guarantee.

MR. B. T. MORRISON, treasurer of the Reading Rubber Manufacturing Co. (Reading, Massachusetts), is back from Europe, and although he has been somewhat under the weather it is gratifying to know that he has fully recovered his health.

MR. E. B. TOWNSEND, brother of the president of the Manhattan Rubber Manufacturing Co., and one of the directors, has just returned from a midwinter vacation to Jamaica, Panama, and the Windward Islands.

Martin Van Buren Jefferson, who died at his home in Worcester, Massachusetts, on March 11, had been for a number of years a director in the Rubber Manufacturers' Mutual Insurance Co. He was president of the Cotton and Woolen Manufacturers' Mutual Insurance Co., and a director in the various other mutual companies in the group comprising the two named here.

B. A. ZACKS & SONS (Erie, Pennsylvania), large handlers of waste rubber, have just taken possession of larger new quarters, at Twentieth and Ash streets. Mr. Henry Zacks, who has been traveling for the house for several years, has been admitted to the firm.

TRADE NEWS NOTES.

THE Standard Welding Co. (Cleveland, Ohio) have arranged to take on the production of the Midgley motor car rim.

It is rumored that Mr. Harrison C. Frost has secured an option on a well known rubber reclaiming plant and is offering part of the stock as an investment.

The Continental Caoutchouc Co. have arranged for their representation at Buffalo, New York, by the Centaur Motor Co., No. 59 Franklin street.

Pirelli & Co., the Italian rubber manufacturers, issued from their New York branch, No. 296 Broadway, on March 15, a revised price list of their tires.

T. & S. C. White Co. (New York) notify the removal of the office of Bergen Port Sulphur Works to No. 100 William street.

The Bay State Machine Co. (Erie, Pennsylvania), manufacturers of rubber machinery, have been absorbed by the Erie Pump and Engine Works, which concern has not yet decided as to whether they will continue the rubber machinery department.

The B. & G. Rubber Co., manufacturers of automobile and bicycle tires and packings, are a new concern located at No. 516 French street, Erie, Pennsylvania. Anthony Birnbaum and R. E. Gunther compose the firm. The last named has had an extensive experience in the rubber manufacture, having been for several years with Whitehead Brothers at Erie, together with other prominent rubber manufacturing concerns.

The India Rubber Specialty Co. (Erie, Pennsylvania) have added to the lines of goods handled by their house an extensive assortment of mechanicals.

The products of the Lake Shore Rubber Co. (Erie, Pennsylvania) are being marketed in Chicago by The McIlroy Hose and Belting Co.

The Erie Rubber Works (Erie, Pennsylvania) manufacture a complete line of government standard bevel stoppers, in addition to which they are now putting on the market a new patent self-sealing stopper, the special feature of which is its resistance to internal pressure, rendering it especially adaptable for corking bottles containing charged liquids. The management of this company is in the hands of Mr. F. E. Hopkins, who was connected for some years with the Lake Shore Rubber Co. and later with the Pennsylvania Rubber Co.

Mr. Maximilian Ekert, of Ekert Brothers, Hamburg, Germany, importers of rubber footwear, is visiting the United States in search of any novelties in the rubber or shoe findings lines. Messrs. Ekert Brothers are doing a very important business on American goods, especially rubber shoes, in Europe, and any manufacturer wishing to do business on the continent may communicate with Mr. Ekert, in care of the United States Rubber Co., New York.

A petition in bankruptcy has been filed in the United States court against Leon Rubay (a corporation), of New York, dealers in automobile supplies. Two of the subscribing creditors are rubber tire concerns with claims aggregating \$85. Peter Zucker has been appointed receiver. The company was incorporated November 20, 1905, with \$25,000 capital authorized.

The regular quarterly dividend of 2 per cent. on the capital of the Boston Belting Co. is payable on April 1.

The regular quarterly dividends of 1½ per cent. on the preferred and 2 per cent. on the common stock of the United Shoe Machinery Co. were payable on March 31.

The Star Rubber Co. (Akron, Ohio) have begun the manufacture of an extensive line of seamless goods. They have recently built a five-story fireproof factory on modern lines, and equipped it with the best machinery and apparatus. The whole force of employés is made up of experienced rubber men from Akron factories. The sales department is in charge of Mr. A. G. Humphrey, who has been familiar with the trade for a number of years. The general manager of the Star Rubber Co. is Mr. J. D. Slater, who likewise has been identified with the rubber business for a considerable time.

TRADE NEWS NOTES.

THE G. & J. Tire Agency, in Philadelphia, has been removed to larger quarters, at Nos. 713-715 Broad street.

The Fairmount park commission, in Philadelphia, have passed a resolution forbidding the use of tire chains on automobiles within the park limits.

A large number of American manufacturers were represented at the automobile and sportsmen's show, at Toronto, during the last week in March. All the tire manufacturers and the leading tire distributors in the Dominion were represented, as well as a few American firms, notably the Diamond Rubber Co.

The Rochester Footwear Co. (Rochester, N. Y.), incorporated November 12, 1907, under the laws of New York, are reported to be planning to increase their capital from the original figure (\$25,000) to one much larger. They are referred to as having a good trade in the "Lady's Companion" overshoe, the invention of S. Schwartzchild, the president of the company, and a modification of what was called the "Emergency" shoe. This was marketed for a while by the Emergency Rubber Co., which has been superseded by the business referred to above.

The United Shoe Machinery Co. it is reported, are to build more of their machines in England, to prevent revocation of their patents under the new law in that country, for which purpose they are enlarging their works at Leicester.

The Hohmann & Maurer Manufacturing Co. (Rochester, New York) are specializing on a new temperature regulator, adapted particularly for use on hydraulic and other presses in rubber mills, many of which are already equipped with this device, and with satisfactory results. The purpose of the device is to control the temperature automatically.

An exceedingly good piece of work of its class is the "American Shoemaking Directory" for 1908, being the fifth annual edition of this work issued from the office of *American Shoemaking* (Boston). It is a complete list of manufacturers of leather shoes in the United States and of tanners and the principal machinery and shoe supply firms.

The Pennsylvania Rubber Co. (Jeannette, Pa.) have filed with the secretary of state at Harrisburg, a certificate of increase of capital authorized from \$750,000 to \$1,500,000.

The Canton Rubber Co. (Canton, Ohio) are specializing on linemen's gloves, in which they are doing an extensive business. A prominent electrical concern which tested these gloves states that "The linemen's glove designed to withstand 10,000 volts, which was submitted for test broke down at point of middle finger at 22,000 volts. On measuring thickness at point of breakage, we find that the glove withstood a voltage of 595 volts per millimeter of thickness."

The Firestone Tire and Rubber Co. (Akron, Ohio) report a volume of business for February and March this year in excess of that for the same period last year. They have issued an attractive booklet illustrated with cuts of 24 different standard motor runabouts equipped with their side wire tires. They have recently erected an additional building which is devoted to drying rubber.

The Progressive Rubber Co. (Mineral City, Ohio) are successors to the Excelsior Hard Rubber Co. One of their specialties is a new line of hard rubber ten pin balls, covered by letters patent.

The plant of the Aladdin Rubber Co. (Barberton, Ohio), reclaimers of rubber, destroyed by fire some time ago, has been rebuilt and is now in operation.

The D. E. Foote Rubber Co. (Cleveland, Ohio) are now handling the G. & J. tires. They have recently enlarged their tire repair department.

A certificate of the assignment of the Emergency Rubber Co. (Rochester, New York) to Albert Vogt was filed in the office of the county clerk at Rochester, on March 19. The company was incorporated October 4, 1905, to exploit a patented rubber shoe.

Review of the Crude Rubber Market.

PRICES during the month have fluctuated to an unusual extent, and the market closed materially higher. Buying has been active at Pará, which has sent prices up in all other centers. Whether this has been due to heavier requirements for Europe remains to be seen. There has been more inquiry for American account, and an increased volume of sales, in spite of the advance in prices, from which it would appear that stocks in manufacturers' hands are less extensive than at one time appeared probable.

Arrivals at Pará (including caucho) from July 1 last to March 18 amounted to 27,005 tons, compared with 20,300 tons to the end of March, 1907, and 28,020 tons for the same period of the preceding year.

Of the 361 tons offered at the Antwerp sale on March 27 about 320 tons found buyers at an advance over brokers' estimations of 2½ to 3 cents per pound. Only a small proportion was bought for American account.

Following are the quotations of New York for Pará grades one year ago, one month ago, and March 20—the current date:

PARÁ.	Apr. 1, '07.	Mar. 1, '08.	Mar. 30.
Islands, fine, new.....	110 @ 117	65@66	76@77
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	118 @ 119	67@68	77@78
Upriver, fine, old.....	121 @ 122	69@70	80@81
Islands, coarse, new.....	67 @ 68	41@42	41@42
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	92 @ 93	48@49	55@56
Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet.....	75½@ 76	43@44	45@46
Caucho (Peruvian), ball.....	86 @ 87	49@50	55@56
Ceylon (Plantation), fine sheet	137 @ 138	75@76	83@84

AFRICAN.

Sierra Leone, 1st quality.....	93@94	Lopori ball, prime.....	61@62
Massai, red.....	93@94	Lopori strip, prime.....	54@55
Benguella.....	45@46	Madagascar, pinky.....	61@62
Accra flake.....	12@13	Ikelemba.....	none here
Cameroon ball.....	45@46	Soudan niggers.....	53@54

CENTRALS.

Esmeralda, sausage.....	53@54	Mexican, scrap.....	52@53
Guayaquil, strip.....	42@43	Mexican slab.....	40@41
Nicaragua, scrap.....	52@53	Mangabeira, sheet.....	42@43
Panama.....	41@42	Guayule.....	25@26

EAST INDIAN.

Assam.....	62@63	Borneo.....	25@26
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Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	3800	Upriver, fine.....	4850
Islands, coarse.....	18700	Upriver, coarse.....	28800
		Exchange.....	15 7/32d.

Statistics of Para (Excluding Caucho)

NEW YORK.

	Fine and Medium.	Total.	Total.	Total.
	1908.	1907.	1906.	1905.
Stocks, January 31.....	83	27	110	128
Arrivals, February.....	995	402	1397	2205

Aggregating.....	1078	420	1507	2333
Deliveries, February.....	959	390	1355	2137

Stocks, February 28.....	119	33	152	106
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PARÁ.

	1908.	1907.	1906.	1908.	1907.	1906.
Stocks, January 31.....	1245	965	1460	850	345	490
Arrivals, February.....	4250	4930	3150	1870	804	1365

Aggregating.....	5495	4995	4610	2720	1149	1825
Deliveries, February.....	4130	4510	3873	1355	700	950

Stocks, February 28.....	1365	485	737	1365	449	875
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ENGLAND.

	1908.	1907.	1906.
World's visible supply, February 28.....	5,080	3,014	3,685
Pará receipts, July 1 to February 28.....	21,195	20,700	21,469
Pará receipts of caucho, same dates.....	3,295	2,050	2,845
Afloat from Pará to United States, Feb. 28	657	634	745
Afloat from Pará to Europe, February 28..	1,950	1,250	970

LONDON, March 6.—The rubber market during the week has been very steady and prices have gradually advanced 1d. @ 1½d. per pound, but sales have been small owing to want of sellers. About 23 tons Straits and 11½ tons Ceylon plantation were offered, and very generally sold. Crêpe brought as high as 3s. 4d. @ 3s. 5d. [= 83½ cents], and 5 cases very fine pale Warriapolla estate biscuits sold at 3s. 10d. [= 93¼ cents]. Lewis & Peat report: "A large business has been done privately in biscuits and sheets at 3s. 1d. @ 3s. 3d., and in good crêpe at 3s. 3d. @ 3s. 4d. per pound." To-day's prices of fine hard Pará is 3s. 2d. [= 77 cents per pound.]

A London report of March 13 says: "During the past week we have had a very strong market, resulting in a rise of about 6d. per pound, for fine. The sales amount to about 400 tons, and include fine hard at 3s. 1d. @ 3s. 7½d. for delivery, according to position."

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

FEBRUARY 20.—By the steamer *Benedict*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.....	174,000	53,000	46,400	157,800	431,200
Peel & Arnold.....	211,200	56,700	51,400	78,200	397,500
General Rubber Co.....	114,800	17,600	133,900	000	266,900
New York Commercial Co.....	170,000	10,600	37,000	300	227,800
C. P. dos Santos.....	20,100	3,600	42,300	....	66,000
G. Amsinck & Co.....	37,500	2,500	1,800	....	41,800
Edmund Reeks & Co.....	1,500	300	11,200	....	13,000
William E. Peck & Co.....	700	....	10,600	....	11,300
Hagemeyer & Brunn.....	2,000	4,000	6,000

Total.....	733,600	153,300	338,600	236,000	1,462,400
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MARCH 4.—By the steamer *Madurese*, from Manáos and Pará:

New York Commercial Co.....	252,400	41,400	60,400	6,800	361,000
Peel & Arnold.....	110,700	70,400	97,500	....	278,600
C. P. dos Santos.....	10,600	6,100	33,700	2,000	61,400
Hagemeyer & Brunn.....	4,000	....	12,500	....	17,100
General Rubber Co.....	132,300	30,200	90,700	1,200	254,400
G. Amsinck & Co.....	183,000	33,400	24,900	28,000	279,200
William E. Peck & Co.....	700	....	11,200	....	11,900
A. T. Morse & Co.....	43,000	7,700	36,100	400	88,100
Edmund Reeks & Co.....	7,000	....	20,400	....	28,300
Robinson & Stiles.....	8,000	1,100	1,700	10,800

Total.....	763,100	160,300	380,100	30,300	1,381,800
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MARCH 14.—By the steamer *Goyaz*, from Pará:

G. Amsinck & Co.....	161,400	21,800	12,100	195,300
Peel & Arnold.....	176,600	31,300	146,400	33,700	388,000
L. Johnson & Co.....	19,000	4,000	14,000	4,900	43,700
General Rubber Co.....	89,700	24,400	96,000	3,600	214,600
C. P. dos Santos.....	10,700	300	14,500	....	25,500
A. T. Morse & Co.....	....	....	23,800	....	23,800
New York Commercial Co.....	4,500	7,000	12,200	1,000	25,600
Robinson & Stiles.....	9,000	600	2,000	....	12,500
William E. Peck & Co.....	2,000	9,800	12,700

Total.....	314,300	68,500	319,600	44,100	746,400
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Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show a decline, as compared with last month:

Old rubber boots and shoes—domestic.....	5½ @ 6
Old rubber boots and shoes—foreign.....	5 @ 5½
Pneumatic bicycle tires.....	6 @ 6½
Automobile tires.....	6 @ 6½
Solid rubber wagon and carriage tires.....	7 @ 8
White trimmed rubber.....	10½ @ 11
Heavy black rubber.....	4¼ @ 4½
Air brake hose.....	3¾ @ 4
Garden hose.....	2 @ 2¼
Fire and large hose.....	2¾ @ 3¼
Matting.....	1½ @ 1¾

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it does not blow under cure.

WRITE FOR PRICES.

Massachusetts Chemical Co.
WALPOLE, MASS.

Operates Walpole Rubber Works; Walpole Varnish Works.



We Are Offering
Scrap Rubber



AT

Low Prices



Theodore Hofeller & Co.
BUFFALO, N. Y.

We solicit your inquiries.



Liverpool.

WILLIAM WRIGHT & Co. report [March 2]:

Fine Pará.—Heavy receipts at Pará caused some forced selling, and about the middle of the month prices dropped 3d. per pound, but have since recovered somewhat. A large forward business was done at the decline, and the market closes at about steady values: Upriver fine 2s. 11¼d., Islands 3s. After this month we may expect a decline in receipts, which ought to have a steadying effect on prices. American demand for the near position is dull, but there is some sign of improvement for distant delivery.

EDMUND SCHLUTER & Co. report [February 28]:

In forming an opinion on the future course of prices it is well to bear in mind (1) that contrary to last year the March receipts are expected to be only moderate; (2) that the apparently very large visible supplies are not unwieldy at the present value of rubber, and last, but not least, that a large section of American consumers, possibly also a number of large consumers in Europe, have no reserves to fall back on. It is moreover quite possible that the unprecedented fall in prices may adversely affect the volume of the 1908-09 crop from July to June. When we last had a visible supply approaching the present one (i. e., in 1902) the end of the year saw prices 9d. over the quotations of February 28, and it may well be that history repeats itself. For the meantime trade all the world over is still very quiet, and the recovery of the market may not come about so quickly as patient holders of rubber would like, and any attempt at forcing the pace would undoubtedly be followed by a relapse.

THE WORLD'S VISIBLE SUPPLY OF PARA, FEBRUARY 28.

	1908.	1907.	1906.	1905.	1904.	1903.
Tons	7113	4160	5047	3692	3599	4701
Prices, hard fine...	2/11	5/1¼	5¼	5/5	4/6	3/9

LIVERPOOL STOCKS OF AFRICAN RUBBER, FEBRUARY 28.

1908.....	350	1905.....	338	1902.....	536
1907.....	301	1904.....	346	1901.....	779
1906.....	298	1903.....	355	1900.....	595

Bordeaux

ARRIVALS at this market in 1907 were less than for the preceding year by just 200 tons. The major share, as usual, was from French West Africa. The falling off was mainly in Conakry niggers (75 tons), Gambia (31 tons), Soudan twists (35 tons), Madagascar (50 tons), Dutch East Indies (48 tons). There was an increase in Soudan niggers, Central American sorts, and "maniçoba" (Ceará rubber).

The stock in the Bordeaux market at the end of 1907 was 135,673 kilograms.

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

PARA RUBBER VIA EUROPE.

	POUNDS.
FEB. 21.—By the <i>Pretoria</i> =Hamburg:	
W. L. Gough & Co. (Fine).....	6,000
FEB. 24.—By the <i>Campana</i> =Liverpool:	
New York Commercial Co. (Coarse)....	19,000
FEB. 28.—By the <i>Mauretania</i> =Liverpool:	
New York Commercial Co. (Fine).....	11,500
Robinson & Stiles (Coarse).....	2,500
MARCH 4.—By the <i>Sibira</i> =Mollendo:	
W. R. Grace & Co. (Caucho).....	18,000
MARCH 7.—By the <i>Lucania</i> =Liverpool:	
New York Commercial Co. (Fine).....	5,500
MARCH 23.—By the <i>Etruria</i> =Liverpool:	
New York Commercial Co. (Fine).....	11,500

OTHER NEW YORK ARRIVALS.

CENTRALS.

	POUNDS.
FEB. 21.—By the <i>Venetia</i> =Colon:	
Schulte & Goschen.....	2,000
Therin & Lartagen.....	4,500
J. A. Paul & Co.....	500
FEB. 21.—By the <i>Terence</i> =Bahia:	
J. H. Rossbach Bros.....	9,000
A. Hirsch & Co.....	1,000
FEB. 24.—By the <i>Alhambra</i> =Colon:	
G. Amsinck & Co.....	2,000
R. S. Nicola.....	1,000
W. R. Grace & Co.....	500
FEB. 24.—By the <i>Merida</i> =Frontera:	
Harburger & Stack.....	5,000
Strube & Utze.....	2,500
E. Steiger & Co.....	3,500
H. Marquardt & Co.....	1,000
E. N. Tibbals & Co.....	500
FEB. 24.—By the <i>El Sud</i> =Galveston:	
Continental Mexican Co.....	*55,000
FEB. 27.—By the <i>Crode</i> =New Orleans:	
Eggers & Heinlein.....	1,000
Schulte & Goschen.....	1,000
FEB. 29.—By the <i>Esperanza</i> =Tampico:	
H. Marquardt & Co.....	2,500
MARCH 2.—By the <i>Financera</i> =Colon:	
Hirzel, Feltman & Co.....	3,500
G. Amsinck & Co.....	3,000
Isaac Brandon & Bros.....	3,500
Piza Nephews & Co.....	2,000
A. Rosenthal & Sons.....	500
R. G. Barthold.....	500
MARCH 2.—By the <i>Vigilancia</i> =Tampico:	
Edward Maurer.....	*155,000
Continental Mexican Co.....	*110,000
Rensche & Helde.....	*110,000
H. Marquardt & Co.....	*15,000
MARCH 3.—By the <i>Carib II</i> =Truxillo:	
Eggers & Heinlein.....	3,000
MARCH 4.—By the <i>Sibira</i> =Columbian ports:	
A. Rosenthal & Sons.....	17,500
G. Amsinck & Co.....	13,500
L. Delius & Co.....	3,500
Therin & Lartagen.....	2,000
West Coast Rubber Co.....	2,500
Bartling & De Leon.....	1,500
W. R. Grace & Co.....	1,000
MARCH 5.—By the <i>Antilla</i> =Tampico:	
Edward Maurer.....	*55,000
H. Marquardt & Co.....	*15,000
MARCH 5.—By the <i>Colon</i> =Colon:	
G. Amsinck & Co.....	11,500
Jose Julia & Co.....	3,500
Andreas & Co.....	2,500
A. Santos & Co.....	4,000
Roldau & Van Sickle.....	2,500
Demarest Bros.....	1,500
Hirzel, Feltman & Co.....	1,000
W. Loeza & Co.....	1,500
Aramburu, Incorporated.....	1,000
Wessels, Kulenkampff & Co.....	500
Pablo, Calvet & Co.....	1,000
MARCH 5.—By the <i>Antilles</i> =New Orleans:	
Ari Rotholz.....	5,000
Eggers & Heinlein.....	2,000
MARCH 7.—By the <i>El Valle</i> =Galveston:	
Continental Mexican Co.....	*55,000
MARCH 7.—By the <i>Mexico</i> =Frontera:	
Harburger & Stack.....	5,500
E. Steiger & Co.....	500
MARCH 11.—By the <i>Joachim</i> =Columbia:	
Schulte & Goschen.....	11,000
De Lima & Cortessa.....	3,000
Suzarte & Whitney.....	2,000
A. Rosenthal & Sons.....	1,500
MARCH 12.—By the <i>El Norte</i> =Galveston:	
Edward Maurer.....	*26,000
MARCH 11.—By the <i>Voltaire</i> =Bahia:	
Poel & Arnold.....	11,000
MARCH 12.—By the <i>Momus</i> =New Orleans:	
G. Amsinck & Co.....	1,500
MARCH 14.—By the <i>Monterey</i> =Frontera:	
E. Steiger & Co.....	7,500
Harburger & Stack.....	5,000
H. Marquardt & Co.....	1,500
MARCH 16.—By the <i>Panama</i> =Colon:	
G. Amsinck & Co.....	6,500
W. R. Grace & Co.....	2,500
MARCH 16.—By the <i>Swedish Prince</i> =Bahia:	
A. Hirsch & Co.....	9,000
L. Johnson & Co.....	1,000
MARCH 17.—By the <i>Hugin</i> =Tampico:	
New York Commercial Co.....	*110,000

Edward Maurer.....	*80
Continental Mexican Co.....	*25,000
H. Marquardt & Co.....	*1,500
MARCH 18.—By the <i>Prins Frederik</i> =Savanna:	
G. Amsinck & Co.....	5,000
Schulte & Goschen.....	3,500
Mantland, Coppell & Co.....	500
A. Held.....	500
Chas. E. Griffin.....	500
MARCH 19.—By the <i>Crode</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	1,000
Eggers & Heinlein.....	500
MARCH 19.—By the <i>Tagus</i> =Columbian ports:	
G. Amsinck & Co.....	7,000
De Lima & Cortessa.....	1,500
J. M. La Paga.....	2,000
MARCH 20.—By the <i>Merida</i> =Frontera:	
Harburger & Stack.....	2,500
Strube & Utze.....	2,000
MARCH 20.—By the <i>El Dia</i> =Galveston:	
Continental Mexican Co.....	*55,000
MARCH 23.—By the <i>Alhambra</i> =Colon:	
L. Johnson & Co.....	4,500
G. Amsinck & Co.....	4,000
Columbian Trading Co.....	3,000
Hirzel, Feltman & Co.....	3,000
Roldau & Van Sickle.....	2,500
Lauman & Kemp.....	2,000
D. A. De Lima & Co.....	2,000
Isaac Brandon & Bros.....	1,000
Meyer Hecht.....	500
MARCH 23.—By the <i>Longfellow</i> =Bahia:	
Poel & Arnold.....	18,000
MARCH 24.—By the <i>El Mar</i> =Galveston:	
National Rubber Co.....	*110,000

* This sign, in connection with imports of central, denotes Guayule rubber.

AFRICAN.

	POUNDS.
FEB. 21.—By the <i>Pretoria</i> =Hamburg:	
General Rubber Co.....	11,500
W. L. Gough & Co.....	7,500
George A. Alden & Co.....	4,500
Livesey & Co.....	3,000
FEB. 21.—By the <i>Campana</i> =Liverpool:	
General Rubber Co.....	70,000
George A. Alden & Co.....	14,500
Livesey & Co.....	7,000
FEB. 23.—By the <i>Zeland</i> =Antwerp:	
A. T. Morse & Co.....	30,000
General Rubber Co.....	13,500
FEB. 26.—By the <i>Venezia</i> =Marseilles:	
Rubber Trading Co.....	5,500
FEB. 27.—By the <i>Majestic</i> =Bordeaux:	
George A. Alden & Co.....	11,500
FEB. 28.—By the <i>Georgia</i> =Liverpool:	
General Rubber Co.....	45,000
FEB. 28.—By the <i>Mauretania</i> =Liverpool:	
George A. Alden & Co.....	11,500
FEB. 29.—By the <i>Amerika</i> =Hamburg:	
A. T. Morse & Co.....	7,000
Rubber Trading Co.....	5,000
FEB. 29.—By the <i>Celtic</i> =Liverpool:	
George A. Alden & Co.....	13,000
Livesey & Co.....	11,000
Joseph Cantor.....	5,500
Poel & Arnold.....	3,500
MARCH 7.—By the <i>Lucania</i> =Liverpool:	
A. T. Morse & Co.....	22,500
Robinson & Stiles.....	3,500
MARCH 11.—By the <i>Finland</i> =Antwerp:	
Joseph Cantor.....	11,000
Rubber Trading Co.....	2,500
MARCH 13.—By the <i>Toutonic</i> =Bordeaux:	
General Rubber Co.....	7,000
MARCH 13.—By the <i>Lusitania</i> =Liverpool:	
George A. Alden & Co.....	4,500
MARCH 16.—By the <i>Waldersee</i> =Hamburg:	
A. T. Morse & Co.....	20,000
W. L. Gough & Co.....	4,500
MARCH 16.—By the <i>Bretagne</i> =Havre:	
George A. Alden & Co.....	15,000
MARCH 18.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold.....	155,000
A. T. Morse & Co.....	50,000
General Rubber Co.....	14,000
Robinson & Stiles.....	11,500
George A. Alden & Co.....	6,500
Joseph Cantor.....	6,500
MARCH 20.—By the <i>Celtic</i> =Liverpool:	
General Rubber Co.....	45,000
Livesey & Co.....	18,000
Poel & Arnold.....	9,000
MARCH 21.—By the <i>Pennsylvania</i> =Hamburg:	
General Rubber Co.....	45,000
George A. Alden & Co.....	11,500
MARCH 23.—By the <i>St. Laurent</i> =Havre:	
A. T. Morse & Co.....	28,000
MARCH 23.—By the <i>Etruria</i> =Liverpool:	
General Rubber Co.....	22,500
George A. Alden & Co.....	22,500
MARCH 23.—By the <i>Touaine</i> =Havre:	
A. T. Morse & Co.....	22,500
MARCH 24.—By the <i>Zeland</i> =Antwerp:	
Poel & Arnold.....	28,000
A. T. Morse & Co.....	22,500

EAST INDIAN.

	POUNDS.
FEB. 24.—By the <i>Minnetonka</i> =London:	
General Rubber Co.....	*4,500
George A. Alden & Co.....	*2,500
Robinson & Stiles.....	8,000
MARCH 5.—By the <i>Schuykill</i> =Singapore:	
W. L. Gough & Co.....	16,000
Poel & Arnold.....	19,000
Hebber & Co.....	8,000
MARCH 6.—By the <i>Neuchâtel</i> =Colon:	
A. T. Morse & Co.....	*18,500
MARCH 11.—By the <i>Kabanga</i> =Colon:	
A. T. Morse & Co.....	*22,500
MARCH 16.—By the <i>New York</i> =London:	
Canadian Rubber Co.....	*2,500
* Denotes plantation rubber.	

GUTTA-JELUTONG.

	POUNDS.
MARCH 5.—By the <i>Schuykill</i> =Singapore:	
Hebber & Co.....	16,000
J. W. Phyle & Co.....	50,000
W. L. Gough & Co.....	55,000
Joseph Cantor.....	35,000
H. Paul & Co.....	20,000

GUTTA-PERCHA.

	POUNDS.
FEB. 21.—By the <i>Pretoria</i> =Hamburg:	
Robert Soltau Co.....	7,000
FEB. 29.—By the <i>Amerika</i> =Hamburg:	
Robert Soltau Co.....	7,000
MARCH 5.—By the <i>Schuykill</i> =Singapore:	
Poel & Arnold.....	4,000

BALATA.

	POUNDS.
FEB. 21.—By the <i>Prins Maurits</i> =La Guayra:	
C. P. Shulstine.....	3,500
FEB. 29.—By the <i>La Saron</i> =Havre:	
W. L. Gough Co.....	4,500
MARCH 9.—By the <i>Nederland</i> =Cumaná:	
Kunhardt & Co.....	2,500
Frame & Co.....	2,000
G. Amsinck & Co.....	1,500
Middleton & Co.....	1,000
MARCH 10.—By the <i>Korona</i> =Demerara:	
George A. Alden & Co.....	7,000
MARCH 20.—By the <i>Adriatic</i> =London:	
W. L. Gough Co.....	2,500

CUSTOM HOUSE STATISTICS.

	POUNDS.	VALUE.
India rubber.....	5,052,289	\$3,017,382
Balata.....	7,089	2,838
Gutta-percha.....	20,378	9,080
Gutta-jelutong.....	1,287,933	77,275
Total.....	6,998,286	\$3,107,175
Exports:		
India rubber.....	86,213	\$33,437
Reclaimed rubber.....	2,939	482
Rubber scrap imported.....	255,903	\$20,827

BOSTON ARRIVALS.

	POUNDS.
JAN. 1.—By the <i>Janeta</i> =Hamburg:	
Poel & Arnold, Africans.....	5,000
JAN. 3.—By the <i>Michigan</i> =Liverpool:	
George A. Alden & Co., Africans.....	13,500
Rubber Trading Co., Africans.....	7,500
JAN. 11.—By the <i>Bethania</i> =Hamburg:	
W. L. Gough Co., Africans.....	5,500
JAN. 13.—By the <i>Sachem</i> =Liverpool:	
Poel & Arnold, Africans.....	2,500
JAN. 20.—By the <i>Hunfreda</i> =Liverpool:	
George A. Alden & Co., Africans.....	6,200
Total.....	40,200
FEB. 7.—By the <i>Laconian</i> =London:	
George A. Alden & Co., Africans.....	15,500
FEB. 17.—By the <i>Inglish</i> =London:	
George A. Alden & Co., Africans.....	8,000
FEB. 24.—By the <i>Arcadia</i> =Hamburg:	
W. L. Gough Co., Africans.....	13,500
FEB. 27.—By the <i>Saxonia</i> =Liverpool:	
W. L. Gough Co., Africans.....	6,200
Total.....	43,200
GUTTA-JELUTONG.	
FEB. 7.—By the <i>Laconian</i> =London:	
W. L. Gough Co.....	55,000
FEB. 18.—By the <i>Montrose</i> =Singapore:	
George A. Alden & Co.....	455,000
FEB. 25.—By the <i>Schuykill</i> =Singapore:	
Behm, Meyer & Co.....	225,000
Total.....	735,000



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BRAZIL'S EXPORT OF RUBBER.

THE figures herewith indicate the weight in kilograms of the exports of rubber from all the ports of Brazil, of rubber produced in that republic, during the past five calendar years. They have been compiled from the returns of the federal bureau of statistics of Brazil, and are in continuation of a similar table presented in THE INDIA RUBBER WORLD July 1, 1907 (page 304). We have had occasion before to refer to the high degree of efficiency to which the statistical office referred to has been developed under the administration of Mr. J. P. Wileman, and the figures herewith may be regarded as representing very closely the totals of the rubber manifests from the different ports. Some of the statistics here included are not available elsewhere.

It will be observed that these figures relate to shipments by calendar years, whereas the Pará and Manaus figures, presented periodically in this paper, relate to "crop years." Besides, the latter include the output from the whole Amazon region, whereas the figures on this page report the Brazilian output alone. This, as will be seen, still shows a tendency to increase. What will be the effect, however, of the recent decline in prices upon the current year's production remains to be seen.

PARA RUBBER (INCLUDING CAUCHO).

Ports.	1903.	1904.	1905.	1906.	1907.
Manaus	16,499,519	15,341,869	15,246,938	14,732,000	16,767,834
Para	12,550,057	13,471,212	10,221,766	16,554,000	16,017,611
Corumbá	255,168	251,369	441,787	217,000	392,594
Itacoatiara		2,475	6,091		117,294
Maranhão	199	13,410	82,646	140,000	12,993
Ilha do Cajueiro	1,072	18,344	17,206		74,355
Porto Murtinho.	2,740	3,810	2,701		
Total	29,318,655	28,792,206	32,073,285	31,643,000	33,382,081

CEARA RUBBER ("MANICORA").

Ports.	1903.	1904.	1905.	1906.	1907.
Ceará	517,824	668,869	589,218	715,000	588,854
Bahia	496,224	939,157	1,443,826	1,410,000	1,285,103
Ilha do Cajueiro	632,868	593,871	557,530	505,000	520,824
Para	950	2,439	350		
Maranhão	27,308	11,471			1,710
Cabedello		1,923	8,527	34,000	9,812
Pernambuco	41,333	97,550	82,666		16,875
Maceió		180			
Rio de Janeiro	5,397	680	100		
Natal					5,500
Total	1,721,894	2,226,977	2,682,217	2,664,000	2,428,678

MANGAIEIRA RUBBER.

Ports.	1903.	1904.	1905.	1906.	1907.
Bahia	355,291	415,579	261,189	262,985	264,811
Rio de Janeiro	43,457	85,195	105,413	129,044	75,586
Santos	62,588	128,691	95,199	88,535	100,931
Corumbá	37,893	50,383	74,733	81,722	75,800
Para	1,896	541	2,805		
Maranhão	3,214	6,301	3,197		6,465
Ilha do Cajueiro	28,100	35,310	29,733		39,896
Ceará	3,996	6,935	19,019		4,777
Cabedello	15,354	22,893	11,742		15,093
Pernambuco	97,849	85,034	30,314	90,953	72,795
Maceió	11,543	10,420	3,294		7,681
Porto Alegre		350			
Porto Murtinho.	490	1,309	480		815
Natal					13,663
Paranagua					15
Total	661,581	855,208	637,199	653,239	678,238

GRAND TOTAL. 31,702,130 31,873,491 35,392,611 34,960,239 36,489,597

BRAZILIAN RUBBER EXPORTS, BY PORTS.

	1903.	1904.	1905.	1906.	1907.
a. Amazon ports.	29,061,422	28,508,227	31,477,950	31,296,000	32,902,738
b. Atlantic ports.	2,344,597	3,042,385	3,394,000	3,361,517	3,117,650
c. Interior ports.	296,201	312,879	519,701	302,722	469,209
Total	31,702,130	31,863,491	35,392,611	34,960,239	36,489,597

a. Para, Manaus, and Itacoatiara.
b. On the Brazilian coast, from Cabedello south to Santos.
c. Corumbá and Porto Murtinho, on the river Paraguay, discharging into the Rio de la Platte, and representing the shipments figuring as exports to Uruguay and Argentina.

DESTINATION OF EXPORTS, 1907.

COUNTRIES.	Para.	Manicoba.	Mangaieira.	Total.
United States	16,115,660	501,976	193,606	16,811,251
Great Britain	12,623,834	1,514,594	215,031	14,353,459
Germany	1,955,516	192,021	183,711	2,331,248
France	2,285,947	215,739	5,375	2,506,161
Belgium	10,021	3,686	4,109	17,816
Uruguay	381,493		76,406	457,899
Argentina	11,191			11,191
Denmark		662		662
Total	33,382,681	2,428,678	678,238	36,489,597

[NOTE.—The above figures do not embrace small shipments of "massaranduba" gum from Pará, amounting in 1907 to 175 pounds, which went to Great Britain.]

ARTHUR DU CROS, some time ago elected member of parliament for Hastings, was a defendant recently in an action brought in a London court by a writer who claims 300 guineas [= \$1533], alleged to be due for services in preparing political speeches for Mr. Du Cros during a former campaign, in which the candidate was unsuccessful. Mr. Du Cros is a member of the family identified so prominently with the Dunlop tire company, and at one time assisted the plaintiff in this action, Frank Harris, to establish an automobile paper. He disputes, however, the value placed upon the work done by the latter in his political campaign.

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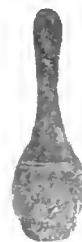
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TABLE OF CONTENTS ON LAST PAGE READING MATTER.

THE RUBBER MILLS GETTING BUSY.

AMERICAN newspapers of late have contained numerous references to the rubber industry—mostly reports that certain factories have resumed work after a temporary shut-down, or that others have increased the number of their employes or the number of working hours per week. In October and November last the same factories were the subject of newspaper reports, but then they were curtailing operations, to render them more secure against a then impending financial storm which, fortunately, was foreseen in time to prevent disastrous results. It would be too much to say that the American industrial situation of a year ago has been revived fully, or even that a normal condition of activity now prevails.

The question arises here, however, as to what are normal conditions. For years and years we saw a steady increase in factory capacity and in the production of goods of all kinds, together with an unprecedented apparent growth in prosperity and national wealth, during which time one might have been thought unpatriotic who dared suggest that this growth could ever reach its zenith, or be followed by a reaction. The reaction has come, however, but not to such an extent as to cause demoralization in industry or trade, and in the stock-

taking which has followed in the period of emergency lessened activity it has been demonstrated that the real wealth of the country is as great as ever, even if for a while overestimated. All the elements of stability and growth remain, the same incentives to legitimate effort, the same vigor and ambition and hopefulness as before the panic, which was not really a panic.

But for a while industrial production may continue on a smaller scale than the maximum figures of the past few years, and new construction may be at a slower pace, and there may be more hesitation than at some time in the past to expand unduly upon a limited basis of capital. On the whole, the scare of last autumn may in the end prove a blessing to the country, in forcing attention upon the need of reforms in the financial and commercial structure, with which the common prosperity is so closely related. Such reforms are less apt to come about when no signals of danger are in sight.

This article has been suggested mainly, by the way, by the reports which continue rife abroad of the closing of so many rubber factories in America and the assumption that this has caused the recent marked decline in the price of crude rubber. Some of the reports to which we refer would imply that many rubber concerns here have gone out of business, but of course everybody at all informed knows that this is not true. Much of the inactivity has been in the rubber footwear factories—large concerns devoted to a single branch of the industry—with which it long has been the custom to close during some part of every year after supplying the demand for goods for a winter's trade. During the season past the footwear factories were closed longer than usual, but at this date—the formal opening of the business year in that branch—all the factories are at work or have fixed a definite date for resumption, and no reason is now apparent why they should not be occupied at full scale during the summer in making stocks for next winter.

Few of the mechanical goods or other rubber factories have been closed at any time, though in a number of them production has been confined to actual requirements, instead of manufacturing for stock in any intervals between orders. No rubber company of importance has become bankrupt or gone into liquidation. The very small concerns that have come to grief probably were not more numerous than usual during the same number of months.

As was shown in these columns last month, the amount of crude rubber imported into the United States during 1907 was larger than in any former calendar year, indicating that the slump in prices could not be due wholly to smaller buying in this country. It seems proper, however, to say here that the rate of imports declined during the latter part of the year, and has not since returned to the maximum figure, but the imports are still large, as compared with recent years, and every indication that reaches us points to a larger consumption of the raw material here before it experiences another decline.

A HALT IN RUBBER PRODUCTION.

THE production of plantation rubber, despite its small volume as compared with the forest product, already has had an appreciable effect upon prices. Last year the actual shipments from Ceylon and Malay States plantations amounted to 1178 English tons. This is not a large figure as compared with, say, 70,000 tons, the estimated total rubber production of the world, but it is something. Not only this, but it is high grade rubber, with a slight percentage of shrinkage, so that 1178 tons of plantation rubber are equal to 1500 or 2000 tons of forest rubber, according as it is compared with Pará, centrals, or the lower grades of Africans. It is an addition to the long established sources of production, simultaneous with an unusual increase in the scale of output from the Amazon. Is it reasonable, then, to assume that the Ceylon and neighboring production has had no effect upon prices? It is to be kept in mind that the plantation rubber has competed with fine Pará, the prices of which have declined more sharply than for established grades from the Congo, for example.

The question now is how far the Eastern product may be expected to bring down prices. Ceylon and the Malay States exported last year 2,640,365 pounds of plantation rubber, against 1,355,816 pounds in 1906—an increase of practically 100 per cent. The exports from Ceylon alone increased in five years just thirteenfold. At the same rate of increase the Far East would soon be producing more rubber than the world's total to-day. But this is not to be looked for. If we take, for instance, the Vallambrosa estate, which during its first year produced only 39,000 pounds, with a gradual increase to 156,922 pounds in 1906-07 and 225,281 pounds in the year ended March 13 last, we find that about half their acreage has been planted not over 3 years. The increase in yield up to date has been due to more trees coming into bearing each year, and a gradual increase in the rate of yield. But many of the trees now probably have reached their maximum yield, and some time must elapse for the newer planting to become productive. Or if the Highlands and Lowlands company is considered—producing 193,389 pounds in 1907 and 134,285 pounds in the year before—we find that only 27 per cent. of their acreage was planted as far back as 1903, and 46 per cent. of it in 1906 and 1907. They, too, will have a period of waiting for the development of new plantings before their output of rubber can show another great increase.

It would be surprising if the current lower prices for rubber should not result in a smaller output, for a time at least, from the Amazon, though for reasons already set forth in these columns the Brazilians will not go out of the rubber business altogether, no matter how low prices may fall. What may be counted upon, therefore, is a somewhat reduced production on the Amazon, and for a while a reduced rate of increase in the output from the Far East, while the extensive planting of the last three

years is developing. By the time all the millions of new trees have come into bearing it may be that conditions as yet unthought of will control the market for crude rubber, but it can be considered as certain that *the total demand for rubber will not be less at any time, but constantly greater.* This is the chief essential.

We look for more systematic and more economical production of rubber, and a better product, both on plantations and in forest exploitation, which will tend at the same time to (1) assured profits for producers and (2) lower prices for rubber and a corresponding extension of its uses. The production of native *Hevea* rubber ought to increase for a long time to come, if human intelligence continues to be applied to the subject, as we believe that it will be; but this increase seems likely to be offset by an inevitable decline in the product of rubber from those species which die with the giving up of their valuable content. Ultimately, therefore, the actual net increase in the world's supply of rubber must come from plantations.

STANDARDIZATION OVERDONE.

THE importance as a factor in modern industrial progress of the principle of standardization of processes and products can scarcely be overestimated. We may go even farther, and consider those improvements in the standards of living which are termed a growth of civilization as based directly upon industrial progress. It is a comfort and a satisfaction that practically universal fittings exist, say for hose—garden, fire, air brake, and the like—and the same is true of rims for motor car tires, and in a thousand other lines of production. Not alone is there added convenience for this reason, but with uniformity of product is associated the manufacture of a vast number of articles exactly alike, much more cheaply than under the old regime, when every one, even to a pin, had to be manufactured separately, so that consumption has enormously increased.

Yet it is possible that the idea of standardization may be carried out too far. To recognize no limit to it is to consider perfection to have been reached, and the necessity for any improvement past. It is desirable that fire hose, for example, should possess such uniformity, in itself and its accessories, together with the apparatus on which it is used, that one may be substituted for another with a minimum of time and effort. But this need not be inconsistent with the continual improvement of fire apparatus, such as is all the time in progress. And while two lengths of hose may have the same diameter and work satisfactorily with the same couplings, the two may differ materially in quality.

If a certain quality of fire hose has been in use, the substitution of another less good should not, of course, be thought of. But the tendency of some modern exponents of standardization would seem to narrow the possibility of a better grade finding a place. They call for hose made of a fixed quantity and quality of materials, com-

lined and treated in a particular way. No premium is offered here to the manufacturer for trying to excel his competitor. A certain quality of hose is wanted, made in a certain way, and the maker or would be maker is not consulted with a view to possibly benefiting from his experience or views. That would open the way for departing from the "standard," and savor too much of the practical to be pleasing to the class of modern purchasing agents, to whom any neglect of their idol, Specification, is sacrilegious.

It has been asserted that ancient Egypt possessed fixed canons of art, sanctioned by the king, who was at once head of state and church, and woe be to that bold or impious artist who dared to draw a picture of man or beast on different lines of proportion than those which had been O. K'd by royalty. Every picture had to conform to an unalterable standard; who cared for artistic progress, when perfection had been reached already? In time, however, the race of royal censors passed away, and new ideas in art found room. Which lends strength to the suggestion that in time even the restrictive specification writer may sink into ancient history.

IT HAPPENS THAT WITHOUT ANY CHANGES in the laws American trade has been growing steadily in whatever direction serious effort has been made, and it may interest some of our readers to turn to another page, where some statistics of American trade with the non contiguous territories appear. During the past five years there has been an annual increase in the values of rubber goods shipped to Alaska, Hawaii, the Philippines, and Porto Rico—the increase extending to each of the classes of rubber goods covered by the customs returns of the total of such shipments in 1907 amounted to \$613,390, or about one-half as much as the total exports of American rubber goods 15 years ago. At that time the shipments of such goods to the places named amounted only to about \$18,000 in one year. Already the shipments of American rubber footwear to Alaska alone are as large as the whole exports from this country 10 years ago. Somebody is selling goods in these dependencies, and presumably other firms can do business in the same field, by the employment of similar methods, whether the congress takes up tariff reform or not.

THE WAR OF THE TAX GATHERERS in the rubber states of the Amazon goes merrily on. When the Acre district was acquired by Brazil from Bolivia, the state of Amazonas, which it adjoined, calmly appropriated the whole region as its own and taxed its exports of rubber accordingly. The sum total soon became too large, however, to escape the attention of the national government, which organized the Acre into a federal district, with a separate taxing system. Whereupon the state government at Manáos asserted that not only was it deprived of revenues from territory rightfully its own, though in dispute, but that the Acre export dues had purposely been fixed at a lower rate than in Amazon as to encourage smuggling from the latter into Acre territory. Now, it is reported, the duties at Manáos have been reduced below the Acre level of rates, with the result that rubber *seringal* owners up country are eager to ship under the Amazonas tariff. Such a program of retaliation cannot be carried on very long without causing the export duties to be abolished altogether, but this is a result too desirable to be hoped for by the shippers.

FROM THE WAY THE BASEBALL opened, there need be no fear that the use of rubber will decline.

SELLING DIRECT TO THE CONSUMER.

AT the recent annual banquet of the Stationers' Board of Trade of New York a report was received from a joint committee representing that body and the Stationers' Association of New York, on the subject of why jobbers and manufacturers will sell direct to consumers. The chairman of this joint committee was Mr. Edward E. Huber, of the firm Eberhard Faber, and a member of the Stationers' Association. Mr. Huber was in attendance at the banquet above referred to, and spoke at length on the work of the committee, adding his personal views of the subject which had been referred to it.

Mr. Huber, speaking from the standpoint of the manufacturer, and of his own experience of over 30 years in the manufacturing stationery business, took the position that the manufacturer is not entitled to the consumer's trade. The manufacturer and jobber sell the retailer and the retailer can sell only to the consumer; therefore the retailer is entitled to protection. The jobber is somewhat responsible for the condition complained of by the retailer. He is in a better position to quote the large consumer as to prices than the retailer, hence procures many contracts which the retailer claims he should receive.

The committee here referred to called upon very many houses, of the various classes in interest, and wrote to others, with the result of gaining a large mass of opinions. Many manufacturers were found who do not sell direct to consumers, or who do so only to a limited extent. Where such sales are made, various reasons were given in justification. But Mr. Huber believes that by the more thorough organization of the retail trade the practice complained of could practically be stopped. He was a great believer in the value of trade organizations, in promoting a better understanding in the trade and in removing wrongful impressions. He felt that the retailer and the jobber should first agree on a method of mutual protection, and if a satisfactory arrangement can be entered into between these two classes of trade, he is confident that the manufacturer can be approached with success. In any event, he felt that some good was bound to come from the present agitation.

Mr. Huber, in addition to his trade organization connections referred to in this article, is secretary of the Rubber Sundries Manufacturers' Association, a position which he has held for a number of years.

A CEYLON VIEW OF RUBBER PRICES.

AT the fifty-fourth annual general meeting of the Planters' Association of Ceylon, at Kandy, on February 14, the chairman, Mr. James R. Martin, said: "Rubber has experienced a fall in price recently, and that fall, I think, is correctly ascribed to the financial crisis in America. If that crisis improves, and it does not spread, we may look for a revival of prices, which will last for a few years, perhaps. Therefore, the near future of rubber depends upon difficulties over which we have no control, and is doubtful; but whatever doubt there may be about the near future, there is no doubt whatever about the distant future, and that is that it lies with the cheap producer; and it is now our duty to organize our estates and labor forces so that Ceylon will be able to produce rubber at a cheaper rate than any other country in the world."

A NEWSPAPER report from Fort Dodge, Iowa, mentions some interest there in establishing a factory to make a rubber substitute invented by Miss Mabelle Newland, of that city, referred to in THE INDIA RUBBER WORLD April 1, 1907 (page 218). The latest report is that "the invention uses wheat as its principal constituent."

THE GUAYULE RUBBER INTEREST.

EXPERIMENTS continue to be made in Mexico in the cultivation of the guayule plant, and with results in some cases that appear encouraging. Mr. Elias Delafond, a civil engineer of Mexico City, whose interest in guayule has been referred to already in these pages, has favored THE INDIA RUBBER WORLD with some photographs of the guayule rubber plant under cultivation, from one of which the accompanying illustration has been made. The picture shows a plant exactly 18 months old; an idea of its size may be gained by considering the coat in the background, to be supported by men of average height. Mr. Delafond writes:

"It is not necessary to waste 15 or 20 years to exploit this plant. At two years the plant is strong enough to give an excellent yield in rubber, which is even superior to that obtained from the wild growth. Here a problem has been solved which I think will interest your readers. Important plantations are now started."

In an article on guayule rubber the *Mexican Herald* notes that



GUAYULE PLANT, 18 MONTHS FROM SEED.

the Society of Natural History of Mexico took up the study of this plant as early as 1876, from samples secured in Zacatecas, and reached the conclusion that the rubber produced was of excellent quality. The plant did not attract attention, however, before 1900, when specimens of it as a rubber producer were sent to the Paris exposition. From that date inquiries began to be received in Mexico relative to the plant, as a result of which the now important guayule rubber industry has been built up.

It appears that the first communication on the subject of the guayule plant to reach the royal botanic gardens at Kew was dated in December, 1902, and came from a London company interested in Mexican lands, in relation to a note appearing in a bulletin of the United States department of agriculture. References to this plant as a possible rubber producer of value had been made already, however, in American consular reports, and THE INDIA RUBBER WORLD had, as early as its issue of February 1, 1897 (page 117), described a sample of the product, received from a correspondent in Mexico.

Dr. Adolpho Marx, of Mexico City, of the Cia Exploradora de Caucho Mexicana, was reported lately to have recovered from an operation for appendicitis.

PARA PRICES AND PRODUCTION.

THE price of Pará rubber is discussed at length by a correspondent of the London *Economist*, who finds reason for believing that a low price level is likely to prevail for some time to come. After treating of the cause of the decline, this writer comments as follows on the probable effect on the production of rubber:

"As to the future production of the Amazon, I do not think that the effect of this decline will be a curtailment of production. The greatest decline in price to the producer during the present crop has been about 42 per cent, while at the present time it stands at about 20 per cent. The margin of profit on the merchandise sent up river in exchange for rubber is very large, probably about 30 per cent minimum, and it is this fact which has saved the situation in past years of crisis when rubber has been sold at even below 2s. 6d. per pound. The fact remains that the production of rubber on the Amazon has steadily increased from 19,000 tons in 1894-5 to 38,000 tons in 1906-7. If our market should decline to a 3s. or even 2s. 6d. basis, the Brazilian would naturally have to face these conditions, and meet them, for the vast trading interests on the Amazon are too valuable to be abandoned.

"That the Brazilians are alive to this possibility, and will meet it, is proven by the fact that during the severe crisis of the few months past the export duty was reduced from 22½ per cent to 19 per cent, and further reductions would undoubtedly be made if necessary. Increased transport facilities have also cheapened the cost of production. Moreover, the sanitary conditions on the upper rivers are much better than in former years, and as there are still vast territories of virgin forests which are practically untapped there can be no falling off in the supplies from these regions.

"Many years must elapse before the production of plantation grades will reach sufficient volume to be a serious menace to the Pará grades, and during this time it is fair to presume that the producer on the Amazon will have so perfected his methods as to enable him to meet successfully such competition, and to preserve the industry which gives us the standard grade of the world."

The *Brazilian Review*, of Rio, in reviewing market conditions on March 14, said:

"At Pará matters seem on the mend and rubber prices have risen 5d., from 3s. to 3s. 5d., or about 15 per cent, and seem likely to go higher still, if only the Pará people can hold on, as is devoutly to be hoped. We ourselves were always of the opinion that rubber prices had been forced too low, and that a little resistance on the part of sellers would bring about a reaction. The rise has been heaviest in *sertao*, or rubber from up country, which has risen 100 reis, whilst *ilhas*, or down river descriptions, have only risen 300 reis. This would seem to point to efficacious assistance from the Bank of Brazil, which has an agency at Manáos, the center of the business in *sertao* rubber, and that local improvement was followed, not led, by a rise abroad."

DR. HAMILTON RICE, a young man from Boston, who is making a reputation as a scientific explorer, was reported by the New York *Herald* of April 9 to have just arrived at Manáos. After more than a year in studying the regions about the headquarters of the Orinoco, Dr. Rice paid special attention to the region of the rio Vaupes, which flows into the Negro, and this in turn into the Amazon, near Manáos. Hitherto practically nothing has been known of the Vaupes, and Dr. Rice's discoveries are reported to be of much value. He reports the region covered with dense forests rich in rubber. The Vaupes is situated to the north and east of the Caquetá, a large tributary of the Amazon down which not a little rubber is now being exported.

The Tubing Machine in Insulation Work.

By a Factory Superintendent.

THE usefulness of the tubing machine is not confined to the production of tubing for the druggists' sundries trade, or to the material from which jar rings are made, or to the solid bodies which evolve into solid carriage tires, and the great number of articles that are cured in molds. It is possible to produce in a day's run from a modern tubing machine rubber for the insulation of wire, however, a higher standard is required.

While speed is desired and essential, in no work done by the tubing machine are the conditions more exacting. Where the tubing machine is used in preparation of stock for mold work, a certain latitude may be allowed. Then, too, the enclosing walls of a mold and the pressure of the curing plates exert a powerful influence toward making a stock behave itself. In the ordinary run of insulation for wire, however, a higher standard is required.

In the first place, stock for this purpose must be so compounded as to eliminate possibility of "blowing" or departing in any particular from the outside diameter required, for there are in the curing process no enclosing walls to enable it to keep its shape or size. In common with other stocks, that used for insulation must be prepared upon the mixing mills until it is of the requisite softness to work readily in the tubing machine. An intractable compound not only delays the speed with which the machine may be run but, by remaining longer in process than usual, develops a tendency to "cure" in the body of the machine, or break up into checks or corrugations on the wire, thus reducing to minimum its qualities as an insulator.

The tubing machine for this work does not differ essentially from that used in mechanical lines, except in the "head." The ordinary tubing machine head is so arranged that the compound is forced out in a line with the machine body or barrel. In fact, in the early days of seamless insulation the attempt was made to cover wire in the same manner, but results were unsatisfactory. Machines were constructed with a hole in the center of the drive wheel which continued through the screw or worm, permitting the passage of the wire to be insulated to, and through the die in the head of the machine. This worked all right with certain compounds, but it was found difficult to control the thickness of insulation thus placed upon the wire.

An inventive genius finally suggested that the wire, instead of passing through the body should pass through the head only, at right angles to the plane of the machine. When tried it was found that this style of tubing machine head when supplied with a die that could be depended upon, furnished practically a uniform thickness of insulation on any size wire, and that this new and peculiar method of ejecting the contents of the machine resulted in a more compact covering for the wire than it had been possible theretofore to obtain. Dies for this work are made in two parts, occupying opposite sides of the head of the tubing machine, and so adjusted as to permit of the insulation contents issuing in but one direction.

The adjustment of the die is a nice operation, for, unless it is properly and securely centered, the insulation will be thicker on one side than upon the other, and a uniform thickness of wall is essential to secure the best dielectric resistance of which a compounded stock is capable. It is equally necessary that the materials entering into the compound be free from anything tending to interfere with the passage of the electric current. For a grain of sand, a minute particle of bark, wood, or fabric, obstructing the die might throw hundreds of feet of insulation "out of center" before discovery. This means always delay and loss. Submarine cables are sometimes made up from conductors run in mile lengths. This insulation must be perfect, and where the tube

machine work is interrupted as described, the entire run is rejected and the wire stripped.

A tubing machine equipped for insulation work would have the following accessories: In front a revolving table holding the coil of wire to be insulated and an automatic device for measuring quantity of wire used. Back of the machine is a table 15 feet long, one foot wide, along which passes the newly covered wire to be wound upon a drum or into a pan. This narrow table has, immediately back of the tubing machine, a closet with sliding doors, and supplied with heat from the steam pipes, for holding the compounded stock that is to be used in the machine. This warmed closet is necessary that its pliability or ductility may be retained until used. The last third of this table is without top, which permits the wire in its passage to sag, more or less, forming slack. This is necessary that the soft insulation material be not marred, nor wound upon the drum so tightly as to flatten it. Winding upon a drum or in a pan is done by hand.

These drums are of steel, and consist of a cylinder with raised sides to hold the wire in place. They are two feet wide and different diameters, and sometimes made so as to telescope, that is to say, each drum fitting into the hollow interior of the next larger, thus permitting a large quantity to be vulcanized at one heat. As a rule drums are used for the harder, cheaper stocks. The workman stands on a small platform that he may work upon the upper surface of the drum. This he turns, matching the speed with which the wire comes to him. He guides the wire, laying it closely in course, and layer on layer.

A tubing machine is sometimes fitted with speed pulleys, but the insulation stock really sets the pace. If it is a "rich" stock, that is, one containing a large percentage of rubber, it could be run upon the wire at great speed, say, three-quarters of a mile per hour. Such a stock, however, would be placed in a pan rather than upon a drum. As the rubber covered wire is coiled into the pan, it is bedded in tale, the greatest pains being taken to avoid abrasion. These pans are made of heavy galvanized iron reinforced with strip and angle iron. They are pivoted to an iron stand and take their speed of revolution from an overhead pulley.

A rare but none the less valuable addition to the equipment of a tubing machine is a thermometer. By drilling a small channel in one corner of the head, large enough to hold it, the operator can, at any time, ascertain the heat and thus intelligently govern one of the essentials to first class production. There is doubtless a lot of intelligence at the command of an experienced operator who uses his sense of touch as guide to proper conditions, but the use of a thermometer has much to recommend it.

It has been urged that a point in favor of insulation applied in the form of strips lay in the application of successive layers in one operation. The chance that an extra coat or two would close possible outlets for escape of electric current was worth while considering. The efficacy of more than one coat, moreover, is thoroughly well established. But the strip machine has no monopoly in this particular. Insulation material can be applied in one, two or three coats or layers at the same time by tubing machines operated in tandem or triplet. That is to say, the machines are placed in line with each other, so that the wires to be insulated pass in succession through all, receiving in each an individual layer, which, however, in the vulcanizing process becomes an integral part of a solid body of insulation.

In this manner stocks possessing different characteristics and differing in cost can be applied to advantage. It is a common practice to have the first insulation coat (next to the wire) of pure Parà rubber, or a white stock, known as "white core," with



THE HOOD RUBBER CO.'S RUBBER FOOTWEAR "MAKING UP" ROOM—THE LARGEST IN THE WORLD.

the second and possibly third coat, of less expensive material. Naturally, as the size or thickness of insulation is increased, larger and more powerful machines are used, especially in the manufacture of large cables, where a considerable horse power is required to force through a tubing machine a quantity sufficient to make a smooth and compact cover. For example, to put a $3/64$ wall on a 14 B. & S. wire would require, say, 25 pounds of ordinary insulation material per thousand feet, and would be run through one of the smaller sizes of tubing machines, while for a submarine cable from several hundred to several thousand pounds of compounded stock may be required for one thousand feet.

A factor to be reckoned with in the operation of a tubing machine is the intelligence and ambition of the workman, and the general management of the department or the mill itself. If time is money, and it certainly is in every institution depending on the quantity it can produce, it follows that the more minutes actual running time for a tubing machine, the greater the production and the lower the cost. Nevertheless, unless this work is systematized and watched it is a golden opportunity for wasting time. It is so easy to complain that the heat of the tubing machine is not right, or the compounded material too stiff, or mill room too slow.

For insulation and for any tubing machine work, the following plan works well: Have heat turned on to tubing machines long enough before the opening hour, so that on the blowing of the whistle they will be ready to take the compound, which likewise has been prepared before the opening hour. In this manner the average minutes delay in getting ready for actual production is avoided. If a machine is capable of turning out 30,000 feet of rubber covered wire in a day's run, it is poor management to fall

short of one or more thousand feet because the machine was not ready. One way to get the maximum production is to pay the operative by the thousand feet of perfect insulation, and not by the hour. Then he will work his "best ficks," and discover more tricks for saving time and getting out the work than the average worker by the hour ever dreamed of.

HOOD'S RUBBER FOOTWEAR "MAKING UP" ROOM.

WHAT is without doubt the largest "making up" room in any rubber shoe factory in the world is that shown in the accompanying illustration. It is a portion of the great factory of the Hood Rubber Co., at East Watertown, Massachusetts. The room shown is 568 feet long and 80 feet wide, with 65-foot wings for additional width. The room accommodates about 1200 workers, and together with the wings about 1700. The work done in this room is, as will be seen, divided into two parts: the preparing of stock for the shoemaker, which is done on the left, and the actual shoemaking itself, on the right. This room is lighted from the sides and by monitor tops, and is in a modern, up-to-date mill construction factory building.

The Stamford Automobile Club, one of the largest in Connecticut, is reported to be contemplating the promotion of a test for tires. The secretary of the club writes that if tire makers will submit their ideas of what a tire contest should consist of the club will endeavor to arrange a competition that will be satisfactory to automobile, and of benefit to the entire industry.

Handling of Mechanical Goods Claims—II.

By Alexander Macpherson.

IN the first part of this paper, published last month, the writer considered claims which might be (1) just, or (2) open to question, even though made in good faith by the customer. But the consideration did not cover fully the class of claims based upon defects, real or fancied.

Now for a claim for defects—say on a threshing belt. A large threshing manufacturer writes that John Smith, the best thresher in his section, bought one of your belts from them this season and now at the end of the season the belt gave out, not due to any accident. He has a dozen men to swear that no accident happened, but that the belt broke in on one edge for about 6 feet at intervals. The cover is also full of small cracks and the belt is rotten. Now you know your belts are not rotten. You sold thousands of them last season without 1 per cent. of just claims, so far. The cracks don't bother you, nor should they bother him. His last belt (your make, likely) went the same way in the first season and still the belt ran for three seasons, so don't let the "rotten" or the "cracks" bother you. If the breaks had not occurred, he would not have seen the cracks. It is the breaks that need explaining. Likely the real explanation is that the manufacturer has notified the thresher that a note falls due on January 2.

Now go back to the selling of the goods. If your contract is in good form it has those two clauses properly worded about construction and material. It also has a clause stating that no allowance is to be made, whether the customer has made an allowance or not, unless the goods are returned to your factory for inspection, and that they are found not to be in accordance with the contract. Further, it has a clause setting forth that if replacement or credit is allowed the purchaser shall pay for the service given by the belt. Answer this good customer's letter yourself in your usual polite style. In comes the belt. "Can't pay my note" is written on its surface. You can read it, if some others cannot. Superintendent and you look over every foot, both sides, both edges, made this season, plies solid, splice intact, seam soft and holding. Surface cracks in cover? Yes, thousands of fine ones, but the belt is not over cured. Same old weather did this. No detriment to belt. Breaks on one edge for about six feet? Yes, several, each about 1½ to 2 inches deep. Is the belt cured straight? It lines up to the straight edge as part of it. Then why those breaks? True, you can tear the belt now that the break has started, but it takes a great strain. The duck is strong, both in the web and in the strand. Then, why did the breaks start? If one started why did it not run right across? The belt could not have run off as soon as the first break occurred or the others would not likely be there.

Then you remember the day the young fellow was fired out on the prairies. The belt flew off. When picked up it had these breaks, but more of them. And what did the boss thresher tell you? He said, "I will teach that young fool not to try and run a 36 inch separator on two inches of belting." "But the belt is 8 inches wide?" "Yes, but engine and separator are way out of line. See for yourself. It takes all of 8 inch 4 ply to run this rig in this long wet straw, so if you get the strain all on one quarter, or even one half of the belt, where will she go?" And then you wondered in your innocence, when the rig had been started again with an old belt, why the hired boy was sent to the village with a broken belt and a letter to Smith, the thresher agent, asking him why he had sent such a rotten belt. All the gang could swear that everything was lovely when the thing just dropped apart. Send a new one, at once, to replace it. He could not run till he got it. Is it not well to study conditions—and men?

Then to straighten his claim. You write your customer telling him conditions, disclaiming responsibility, but offering to cut out the damaged part, let in 6 feet of new belting if necessary, make two splices under the press, stitch them, and the belt in this form may run its natural life. Charge for the new piece of belting to be regular contract price, and for splicing, cost, stating the figure. This may clear it up, but again he may come back stating his customer demands a new belt. Let him know of your prairie experience. This passed on may show Mr. Thresher that he is not up against a greenhorn, and he may accept the offer. But perhaps your customer puts on the sad mouth and thinks you should help him out. This is not in the contract, but he is a good customer and the temptation to sacrifice the company's present rights to attain future good is strong. He has bought so many thousand dollars worth from you in the past five years, the account is growing, you have all his business now instead of half two years ago. You would gladly spend the cost of the belt on him any time. He practically admits you are right, so the reputation of the goods does not suffer. Make sure of this. It is of first importance.

Perhaps you suggest sending a new belt at one-half its value. If he accepts, you are out on selling price one-half the belt, but you are in the old belt and even on good will of the customer. You have stated that the old belt can be put in fair shape. Put it in shape. Send it to the branch in the wheat belt and ten to one your bright manager will get the half back for you. But what if you can't get your half? Suppose your customer sides with him and demands a new belt. Is he honest in his claim? Has not your argument been too weak? Is it worth a belt, less the value of the old one, to hold his good will? Or is his claim to be classed to Policy account? If there are many like this with him, there is something wrong either with you or with him. If it pays, then accept your defeat gracefully. It is not nice, but necessary, and look over your defeat, learn something from it, and be ready to take the next similar case in a better way. You still have the old belt to sell, and the old customer to sell new goods to, and this may more than balance the charge to Policy account.

When it is all over your assistant comes to you with the claims ticket neatly filled in, in accordance with the history. You initial. The claims ticket goes to the bookkeeping department, the instructions ticket to the receiving department, an order for repair and shipment to the order department, but you are through after the initial is attached.

On Class No. 3 let us be brief. Go slowly before so classing an account. Give the customer all the chance in the world to be good, and then when he will not change his ways, shut him off in a quiet but firm manner. No use entering into details. He knows he is wrong, and while he may curse you, deep down in his heart he will respect you. He has done up so many others in his day that it is a new sensation to be quietly told that you cannot do business with him any longer.

I have opened class 3 for various accounts for different reasons. Perhaps a little account got on the accountant's nerves. Wouldn't live up to his agreement, settled when he liked, and then deducted his cash discount. It does not pay to have the accountant's nerves upset and it does not do to let the other fellow run your business. Class 3 for this account. It doesn't pay to have your own equilibrium upset by petty worries. You are out for business and money. If you have the right goods it is easy to sell them. Then if you find it unpleasant to do business with an account, shut it off. There is lots of business to be had that will pay you better. This one account takes more out of you than

many others combined. It takes so much out of you in worry that it causes you to lose money on other accounts because you cannot handle them properly. The time used elsewhere means good money pleasantly made. Class 3 for the worry account.

To handle a claim to the queen's taste, I must first be sure I am right and then get my man in my office. If I can look him in the eye, I can generally convey my fixed conviction. The ways and means differ and require study, not only of the details of the case, but of the man. Sometimes I have had to do a little bullying; I don't like this, but cases may justify such conduct. In one case valves had been ordered by stock number and supplied as ordered. I had an assistant report quantities, dates, and stock numbers of all valves similar in dimensions ordered by this customer for some years back. Fortunately, I could reach my man, the purchasing agent. I saw that he had been buying a higher grade of valve in smaller quantities and at longer intervals for years. Then he switched to two lower priced stocks, bought oftener and bought more valves. Evidently, the upward tendency of rubber goods had decided him to try a cheaper valve. I had to bully him a little at first, only a little, because he did not want to take up with me what he had already taken up with the traveler. But when I bullied him down to facts he could not but admit that I had proved my case. He has been paying for the better valves ever since and saving money.

I stated earlier that what is a defect to the user is not always one to the maker. Your job is to see both view points and then if you are right convince your customer that he should withdraw his claim. For instance, a paper mill man ordered a belt from us, just so many feet and so many plies of a certain width of a commercial brand of belting. Very soon it came back, ripped from end to end. I could see no evidence of defective construction. It was the regular quality of its brand; it was not over cured. Letters passed, our man saw where it had run, on one of the most difficult drives in a paper mill. The secretary of the paper company called on me. We had a long talk. I did most of the talking. No move by him. He admired our new catalogue. "Yes," said I, "a fine catalogue; good paper, good cuts, and well bound. If the paper were not so high in grade, the cuts would not show up so well. We might have used news paper and saved money, but the cuts would not have shown up properly. Still news paper is all right for the purpose for which it is intended." "Certainly," said he, "but not for catalogues like that." I had him "Just like that belt; all right for ordinary work, but not intended for use on a centrifugal pump." He smiled; he saw the point and he settled like a man. From his original view point he was correct in his claim. He said he had ordered a good belt and I told him we had sent him a good belt. The fault lay with his not ordering a belt suitable for the place, and there we stuck till I got my catalogue inspiration.

THE HARM THAT RUBBER TIRES DO.

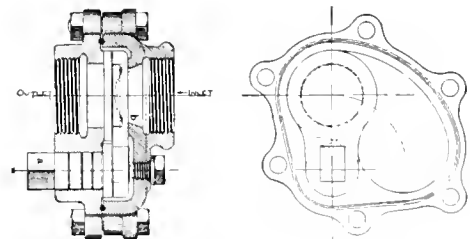
PROBLEMS of interest in connection with pneumatic tires are to be discussed at an International Road Congress which has been called at the instance of the government of the French republic, to be held in Paris, October 11-17 next. The United States government has received an invitation to be represented, besides which state and municipal governments, chambers of commerce, automobile clubs, transportation companies, technical societies and the like are entitled to representation. Officially it is stated that the congress is to be held for the purpose of studying questions connected with the adaptation of roads to the new modes of locomotion. When Macadam first put down the rock surfaced highways, now known by his name in every civilized country, he figured that the constant passing of iron tired wagons over a crushed stone highway would grind dust particles from the stones; that those particles would fill in all interstices, and that wettings and rollings would

not only give a hard, smooth surface, but that the highway would improve with the passing of years. This theory was amply justified in practice until the advent of the automobile, since which time in the opinion of many the highways have been deteriorating. While every iron bound wagon tire was doing its own small percentage of rock crushing, dust making, road smoothing, and rock tamping, every rubber automobile tire was undoing that work by taking the dust away, through the tractive and centrifugal force exerted by its rapidly turning wheels.

Director L. W. Page of the office of public roads of the United States department of agriculture says: "Nobody who has made a study of the hard surface roads will deny that the motor car is shortening the life of such thoroughfares, but this is no reason for the condemnation of the automobile. The arrival of this machine has created a new and unlooked for condition. That means that the new condition must be studied and the problems in road maintenance which have arisen must be solved."

"EVERLASTING" BLOW-OFF VALVE.

A BLOW-OFF valve constructed on an entirely new principle is called by the manufacturers, the "Everlasting" having reference to its endurable qualities under conditions of unusual severity. The valve is composed of a top and bottom bonnet, a disc and a lever and post, and is referred to as being exceedingly simple in construction. The two bonnets are set together upon an approved high pressure gasket with top bolts, giving quick access to the inside, should it ever be necessary to renew the disc or reface the seat. The "Everlasting" valve is designed



"EVERLASTING" BLOW-OFF VALVE.

primarily for blow-off service, but its rugged and substantial construction has brought it into use largely in paper mills for handling pulp, also in rubber and soap works and galvanizing plants, where its nonclogging features, as well as its property of keeping its seat always clean and pressure tight, have made it desirable. This valve has been sold to a number of leading rubber mills, where it is esteemed for its durability in connection with heater vulcanizers, as the exhaust steam, containing more or less sulphur and sulphuric acid, is apt to eat the seat out of brass valves. [Osgood Sayen, 421 Arcade building, Philadelphia.]

CAUSE OF "ROTTEN HOSE."

FROM THE NEW YORK "JOURNAL OF COMMERCE."

REFERRING to the question of the New York fire department hose a prominent underwriter who is especially well informed on fire department matters said recently:

"In all the talk about 'rotten hose' it seems strange to me that no one has touched upon the way of carrying the hose as having anything to do with the 'rotten' part. The hose now is folded and packed in a wagon, and it goes without saying that wherever there is a bend or a fold it will very soon become more or less weak, and with a little extra pressure will break. The hose should be carried on a reel or in a coil so as to avoid any bending or doubling of it. Just so long as it is folded we will have hose which is weak at different points."

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IN the period of low priced rubber out of which we seem to be now emerging not much has been heard of synthetic rubber or new substitutes. This quiescence is, no doubt, only temporary and the promoter will again seek to attract the attention of the credulous to the schemes he has on hand. A

GENERAL REMARKS.

project which seems to be hanging fire at the present time is one for making good rubber from peat at a cost of 1 shilling per pound. I was informed by a business man unconnected with the rubber trade that it was a most important project with a lot of money in it and that he understood that a prominent British rubber manufacturing firm had put up £20,000 out of the £60,000 required to bring the manufacture to fruition. Whatever the scheme may have in it as regards money I am satisfied that the particular firm's £20,000 is still in their own hands and I should imagine that it will so remain in these prosaic days, when a belief in miracles forms no part of the business man's tenets of procedure. Although rubber has had a spurt in price it is again on the down grade as I write, and there is a good deal of perturbation among holders of rubber planting shares as to what the future has in store for them. New capital, however, is easily forthcoming, the two latest companies having been over-subscribed long before the lists closed. With regard to the forthcoming Rubber Exhibition at Olympia, I suppose there were good reasons for holding it in September, but this is certainly a time when a great many people are taking their holidays and are to be found anywhere but in or near London. Judging by the lists of officials and supporters published, the producing rather than the consuming side of the industry are running the show, so to speak, and I do not find that much is known about it at the rubber works.

In the light of what is generally known and accepted with regard to the inimical action of copper on rubber, it is rather

BRASS AND RUBBER.

surprising that its principal alloy, brass, should have been used to some extent in connection with rubber as if it was quite innocuous. In certain admiralty packings brass wire of very fine gage has been a component part, and I have often wondered whether its use was advisable. A change, however, has now to be recorded, the last specification stating that the brass wire is to be tinned. This adds slightly to the expense, but it certainly seems a move in the right direction. Apart from wire brass, filings have been used in certain forms of rubber packing, though it is not easy to see what useful purpose they serve.

THE case of The Dermatine Co.'s Limited, v. Martin's Patent Pneumatic Disc Wheel, after having been in preparation for many months, at last came into court on

LEGAL CASE.

February 26, when a settlement was arrived at soon after the opening. The dispute about the plaintiff's charges arose in connection with the work done for the Martin Motor Tyre Syndicate, a concern which has now ceased to exist.

I NOTE that a prominent reclaimed rubber firm have announced in the columns of our London contemporary that they do not use any pontianak in the process of their manufacture. I imagine that this disclaimer is the outcome of the North Western Rubber Company and Huttenbach proceedings. The public announcement of the fact that the Litherland Company bought large quantities of pontianak in the course of their business has not unnaturally led to a general idea that it forms a component part of the company's principal products. I have no information

on the points from the company itself, but from outside sources which may be taken as quite disinterested, I gather that this supposition is quite erroneous, and that the pontianak is used for a purpose quite distinct from the manufacture of reclaimed rubber. Looking at the matter from an analytical standpoint, I can foresee great difficulties in the way of certifying to the presence of pontianak in a rubber mixture not of a high grade. The fact that about 80 per cent. of it is soluble in alcohol is of course a help, provided that other highly resinous rubber substances, such as almidon and African flakes, are absent.

BUSINESS proceeds on steady lines, but there is nothing in the nature of a boom to be recorded, and it cannot be said that the

THE PROOFING TRADE.

expectations of those who prophesied a great revival have been fulfilled. At the same time it is certainly the fact that the mackintosh coat of good quality is being worn much more than was the case four or five years ago. The proofers complain of great cutting in the trade, much more than there should be, they say, considering that the business is a somewhat special one and not like mere tailoring, which needs no long experience or special machinery. The absence of any fixed minimum price for particular work is a great drawback, as this enables the middleman who wants cloth proofing to cut down the proofer to his own ideas of price, at which, so he says, he can get the work done elsewhere. The India Rubber Manufacturers' Association does not concern itself with the proofing branch, but there is a subsidiary association specially concerned with it, but according to the statements of one firm which retired from membership it does not seem to be of any particular benefit, or to have remedied evils generally complained of. Unlike certain branches of the trade the proofers have not issued lists notifying reduction in price because of the fall in raw rubber, the main reason for this abstinence being that they did not raise prices when rubber went up, as the mechanical rubber manufacturers did. Large firms in the trade report themselves as fairly busy, but the position in the home trade is not quite so satisfactory as in the last two years. There has been a considerable demand for men's mackintoshes, mostly of the double texture brown paramatta class, the heavy tweed cloths being in very small demand except for special purposes. As regards the shipping trade, especially to South America, things depend a good deal upon existing affairs in the several states. At the present time business relations with Chile are almost at a standstill, and goods destined for that market are being held back until more favorable conditions supervene. The annual meeting of J. Mandleberg & Co., Limited, was held in Manchester on March 31, when a dividend for the year of 12½ per cent. was declared, with £14,355 carried forward. This must be considered highly satisfactory, though it should be noted that they do not now rely solely upon the proofing branch as a source of income.

IT is out of my usual custom to notice in this correspondence books which are not directly connected with rubber. But a new

A NEW BOOK.

book on the "Analysis of Paints, Pigments, and Varnishes," by Professors Holley and Ladd, of the North Dakota Agricultural College, contains so much of subsidiary interest to the rubber manufacturer that a few words of reference may not be out of place. A good many of the pigments and colors of which details and analyses are given, are largely used in the rubber trade, and the references to the lead compounds zinc oxide blacks and reds contain a good deal of up-to-date information. It appears that the best New Jersey zinc oxide made direct from the ore is of 99.75 per cent. purity, but that the oxide from

Mineral Point, Missouri, and Kansas contain varying amounts of lead which would be disastrous for their use in white rubber goods. It is generally supposed in England that even the best zinc oxide made direct from the ore is inferior to the Belgian oxide for rubber work, and it would be interesting to know how this compares with the best New Jersey oxide. With regard to sublimed lead, which I believe is largely used in American rubber works, the average composition is stated to be 75 per cent. lead sulphate, 20 per cent. lead oxide, and 5 per cent. zinc oxide. Shellac, it appears, is nearly always more or less adulterated with rosin before it leaves India, 30 per cent. being a not uncommon amount, though in connection with this point I understand that an addition of 1 or 2 per cent. is a necessity in order to raise the melting point so as to prevent it "hocking" in transit. Lithophone we know well on this side, but ponolith has a novel sound about it: they both have much the same composition, however—viz.: zinc sulphide 28 per cent., barium 60 per cent., with a little zinc oxide, etc. Emphasis is laid on the somewhat loose nomenclature associated with the various blacks, and the superiority of calcined lampblack over the best carbon black is pointed out. This of course from a painter's point of view, but the matter is not without its significance to the rubber manufacturer, who does not always discriminate closely between the blacks offered him by the dealer.

MR. P. CARTER BELL, whose name needs no further particularizing to the American rubber trade, has been in England recently, and in connection with certain business matters he has visited various rubber works in England, Scotland, and France. His father, Mr. J. Carter Bell, lives in Manchester, being the public analyst for Cheshire and various boroughs.

PERSONAL MENTION.

Mr. Waddy, whose training was gained in the Manchester district, is now chemist at Messrs. Spencer Moulton & Co.'s works at Bradford-on-Avon.

Mr. Coutts, for many years manager at the Irwell and East ern Rubber Works, has retired from active participation, owing to considerations of health, though he attends at the works on special occasions. His former position is now occupied by Mr. J. Gillson Tinto, a son of the managing director, who is now chairman of the India Rubber Manufacturers' Association.

Dr. W. R. Armandy, n.s.c., whose name has appeared more than once recently in connection with tires, holds a scientific post at the large soap works of Messrs. Crosfield at Warrington. Formerly, however, he was chemist at the adjoining rubber works, which is at present known as the St. Helens Cable and Rubber Co.

Mr. S. T. Rowe, who was for many years with Messrs. Charles Macintosh & Co., Limited, leaving them to take up the position of manager of the proofing department at Messrs. I. Frankenburg & Sons, Limited, is now a director of the latter company.

Robert Walmsley, a pensioner of Messrs. Charles Macintosh & Co., Limited, in whose service he had been for a number of years, died recently. His name is known in connection with spreading machines, the double deck double ended machine patented by Rowley and Walmsley in 1887 being an improvement on a previous double deck machine patented by Walmsley and worked by him at the Macintosh works.

A CARD FROM MR. COOPER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I notice in your issue of February 1 (page 143), under the heading of "The India-Rubber Trade in Great Britain," a sub paragraph referring to the Dermatine Co., Limited, in which it is mentioned that I have left the Dermatine Co. and have joined the Motor and General Rubber Co., of London and Harpenden.

I would point out that the correct style of my present firm is the New Motor and General Rubber Co., Limited, and that my

father, the late John Cooper, was never general manager of the Dermatine Co., being manager and secretary of the company, since 1888, afterwards being appointed managing director, which position he held at the time of his death. After his death, his duties were divided between Mr. Hart, who was appointed general manager, and Mr. Webb, managing director.

I remained in their employ for about a year after my father's death, as one of their representatives, but left of my own accord a year ago, to take up a position here as general manager. Yours faithfully,

JOHN COOPER.

Harpenden, Herts, England, February 14, 1908.

NEW FEATURE IN BRITISH PATENT LAW.

THE new patent and design act which went into effect in Great Britain and Ireland on January 1, 1908, appears to have altered very greatly the position of any foreigner applying for a patent in the United Kingdom. Not that the foreigner stands upon a different footing in applying for a patent from a British subject, but a new regulation appears in paragraph 27, the first part of which follows:

"At any time not less than four years after the date of a patent and not less than one year after the passing of this act, any person may apply to the comptroller for the revocation of the patent on the ground that the patented article or process is manufactured or carried on exclusively or mainly outside the United Kingdom."

Any decision of the comptroller under this section shall be subject to appeal to the courts, but it clearly is the purpose and intent of the new law that the compulsory working within British territory of all British patents shall result. The *Dublin Chronicle* is quoted as saying, at the end of January: "The new patent act in a month's time has found additional work for nearly 2,000 people, and before the end of 1908 it is estimated that quite 10,000 British workmen will be employed as the direct consequence of this particular piece of legislation."

Daily Consular and Trade Reports (Washington) intimates that American and German firms are arranging already to establish factories in Great Britain in order to hold their patents. It points out further that the new regulation virtually prevents the patenting in Great Britain of small improvements on any foreign made machines now being sold in that country.

FIRE HOSE CONDITIONS IN BOSTON.

THE various municipal departments of Boston recently have been investigated by a special Finance Commission, under the chairmanship of Nathan Matthews. As one result, a separate communication was made to the mayor and city council relating to the fire department, in which is embraced this, in connection with other recommendations:

"Tests, at least once a year, should be made of all appliances subject to deterioration, particularly of hose. No such general test has been made within the last eighteen months. One is now being made at the suggestion of the commission. Hose is bought on a five year guarantee, and there is no reason to doubt that most of that used by the department is in good condition; but in view of the reports of the recent experience of New York, frequent tests are necessary."

Another paragraph of the report follows: "In the purchase of supplies there is no public competition by advertisement. Large quantities of various articles are purchased upon bids invited from chosen dealers. The fire commissioner believes that he secures good results by this method, but this commission has already criticized and condemned the practice in other departments and has no reason to believe that there should be any different rule here."

It might be mentioned that Boston at least has not yet had any "rotten hose" scandal.

Rubber Goods Manufacturing Co.'s Annual.

THE ninth annual meeting of shareholders of the Rubber Goods Manufacturing Co., a corporation of New Jersey, was held at the registered offices of the company in Jersey City, on Thursday, April 9. The annual reports of the officers of the company were read and approved, and are given here in full form:

PRESIDENT DALE'S REPORT.

TO THE STOCKHOLDERS OF THE RUBBER GOODS MANUFACTURING CO.: The report of the treasurer showing the business and condition of your company for the ninth year of its existence is herewith respectfully submitted. The figures of this report have been arrived at through the exercise of the most careful conservatism. In connection with these figures and in accordance with the usual practice, it will not be out of place for your president to here add a few remarks of general interest.

As in several years past, perhaps the first consideration has been given and greatest care exercised in maintaining and in fact appreciating the investment by keeping up the various manufacturing plants to the highest degree of efficiency and augmenting the good will in their commercial product. Additions, replacements and repairs to buildings and machinery have

in no case been omitted or delayed when their advantage or necessity has been demonstrated; and this will naturally result in reducing the cost of operation and thus lessen the proportion of overhead expense.

The high standard of excellence of the various manufactured products—notably hose, belting, packing, tiling, rubber thread, automobile, bicycle and vehicle tires—has been maintained, and unremitting effort expended on them to enhance their intrinsic merit and consequent reputation and good will with the purchasing public. Undoubtedly the result will be made evident and bear fruit when normal business conditions shall be re-established.

Through the ownership of the General Rubber Co. by your company and United States Rubber Co. together, your company has participated to the extent of practically its entire requirements in the operations of the General Rubber Co. in obtaining supplies of crude rubber and in all the benefits accruing therefrom. Wherever feasible, and as promptly as possible, the large selling organizations and numerous avenues of distribution of the United States Rubber Co. have been utilized and put upon a permanent basis when advantage has been shown; so that the opportunities made possible by the ownership of stock in your company by the United States Rubber Co. have been grasped and their benefits acquired by your company.

The usual dividends of 134 per cent. quarterly have been regularly paid during the year on the preferred stock, and two dividends of 1 per cent. each on the common stock. Respectfully,

CHARLES H. DALE, President.
Jersey City, New Jersey, April 9, 1908.

The annual election resulted in the board of directors being continued without change, as follows:

Charles H. Dale, Ernest Hopkinson, Charles A. Hunter,
Frank W. Eddy, Arthur L. Kelley, Samuel P. Colt,
Anthony N. Brady, Lester Leland, John J. Watson, Jr.

At a meeting of the board, held later in the day, at No. 42 Broadway, New York, the following were reelected officers of the company: Charles H. Dale, president; Lester Leland and Charles A. Hunter, vice presidents; John J. Watson, Jr., treasurer; Samuel Norris, secretary, and John D. Carberry and James McGuffog, each with the title assistant treasurer and assistant secretary.

The financial reports were audited by Henry T. Bragg, C.P.A.

A REPORT ON RUSSIAN OLD SHOES.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Your reports stating the American market for old rubber to be very dull will probably soon undergo a change, since Russia will no longer ship any old rubber shoes to America, inasmuch as the Russian rubber manufacturers are now paying 4 rubles per pood. After adding the export duty, freight, insurance and other charges, amounting to say 2 rubles per pood, this is equivalent to 6 rubles delivered cost, freight and insurance New York, or to £40 per ton = 834 cents per pound. Moreover, the supply of old rubber shoes is very small. As soon as Russia stops shipping old rubbers to America, your rubber manufacturers will be compelled to pay high prices for American old rubber shoes. Yours very truly,

M. J. WOLPERT.
Odessa, Russia, March 20, 1908.

[The Russian pood equals 36 pounds, and the ruble 51½ cents. Four rubles per pood, therefore, would equal a little more than 5.72 cents a pound, and 6 rubles something more than 8.5 cents.—THE EDITOR.]

BALANCE SHEET.

ASSETS.		Mar. 31, '08.	Mar. 31, '07.
Cash		\$130,632.60	\$483,819.92
Mortgage notes (for property sold)	17,500.00		18,000.00
Accounts and notes receivable	229,538.60		88,709.21
Investments, stocks of allied companies	27,437,915.48		27,639,722.15
Total assets		\$27,821,286.68	\$28,230,251.28
LIABILITIES.		Mar. 31, '08.	Mar. 31, '07.
Preferred stock	\$10,351,400.00		\$10,351,400.00
Common stock	16,941,700.00		16,941,700.00
Working capital	309,548.35		576,065.00
Bills payable			160,000.00
Total liabilities		\$27,602,648.35	\$28,029,165.00
Surplus		\$218,638.33	\$201,085.68
INCOME AND DISBURSEMENTS FOR YEAR ENDING MARCH 31, 1908.			
Surplus at beginning of year			\$201,085.68
Income from dividends declared by allied companies for year			1,191,794.00
Total			\$1,392,879.68
Less total expenses paid for year			110,809.35
Net income			\$1,282,070.33
Four dividends paid to			
March 31, 1908, Preferred		\$724,598.00	
Two dividends paid to			
March 31, 1908, Common		338,834.00	1,063,432.00
Balance, Surplus			\$218,638.33
SYNOPSIS OF OPERATIONS OF ALLIED COMPANIES FOR YEARS ENDING DECEMBER 31.			
	1907.	1906.	
Sales	\$21,473,823.28	\$19,737,120.81	
Gross earnings	2,371,827.44	2,646,458.85	
Repairs and depreciations	\$300,067.93		
Sinking fund for bonds	64,245.91	370,313.84	
Net balance of profit	\$2,001,513.60	\$2,004,484.26	
Dividends declared for year	a 1,243,928.00	b 1,276,280.98	
[a—to March 31, 1908. b—to March 31, 1907.]			

“Hoolihan’s Hose Specifications” Discussed.

THE appearance in THE INDIA RUBBER WORLD last month of the article entitled “Hoolihan’s Fire Hose Specifications” has called forth a considerable volume of correspondence, extracts from which will be found below. First is given a letter from the president of the Boston Manufacturers’ Mutual Fire Insurance Co. Then follow several letters from rubber manufacturers, most of whom have indicated a desire not to be mentioned by name; in consequence the name of none has been printed. For the most part, it will be seen, these writers approve the sentiments of “Hoolihan,” though one letter takes the opposite position.

FROM THE FACTORY MUTUAL HEADQUARTERS.

BOSTON MANUFACTURERS’ MUTUAL FIRE INSURANCE CO.,
31 Milk Street, Room 611.

Boston, Mass., April 11, 1908.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The “Hoolihan” article on “Fire Hose Specifications,” published in your April number, has furnished us with much amusement. I would be wholly lacking in a sense of humor if I had not enjoyed the many “hits,” which are so well and happily made that they leave no sting behind them. There is more truth in the article than perhaps appears on the surface to a casual reader not fully acquainted with the conditions, and the manufacturers’ side of the question needs, I think, more support than it usually receives.

Apparently the intent of the article is to give in a humorous way the manufacturers’ point of view in regard to the expert supervision exercised by at least one of the laboratories maintained in connection with the fire insurance interests. It is well to remember that there are two sets of laboratories, which are entirely independent of each other—the Factory Mutual Laboratory, located here in Boston, and which is under our supervision, and the Underwriters’ Laboratories, so called, located in Chicago, over which we have no control.

It is not the purpose of this letter to defend the methods of our laboratory. They need no defense. The good work which our laboratory has done in devising the original “specifications” for underwriter fire hose and testing the product of the manufacturers, is well known. The specifications and the methods of testing were devised by our experts in full consultation with the manufacturers of hose and with their approval. We employ no so-called “traveling experts” to go about visiting the factories and supervising methods of manufacturing, nor do we place “tin tag” on the products. That would be carrying the matter too far. In other words, it would be “expert bossing of another man’s business.” Representing as we do our members, our province is to furnish the manufacturers with certain specifications for them to live up to. We then ask them to give us results and we assist by such inspections at the factory as may be necessary. The real responsibility for furnishing good hose must rest upon the manufacturer himself. If we were to carry the question of expert supervision too far, and to “tin tag” the product, it would result in removing all responsibility from the manufacturers and place it upon the underwriters, where it does not belong. In addition, such a course would tend to destroy the individuality of the manufacturer, making him a mere machine. This would be detrimental to the interests of not only the manufacturer, but the users of hose whom we represent.

Thanking you for the pleasure which the article has given me and for the opportunity of replying to same, I remain, Sincerely yours,

J. P. Gray, President.

STANDARD FIRE HOSE SPECIFICATIONS UNDESIRABLE.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We have read “Mr. Hoolihan’s” dissertation on fire hose with considerable interest and amusement and assume that the attempt recently made to formulate standard specifications for fire hose for municipal

service is the reason for printing Hoolihan’s latest utterance on this subject.

Good natured humor, or even public ridicule, is oftentimes a more effective weapon than serious argument. From our point of view, we do not look with favor upon the proposition for a standard specification for fire department hose. We do not think that any manufacturer will acknowledge that either the underwriters’ fire hose business or the M. C. B. air brake hose business, which at the present time is based on standard specifications, is satisfactory or profitable. If a standard specification for fire department hose were adopted we think it would be only a question of time before this business would be practically as unprofitable and in many ways as undesirable as the two classes of trade just mentioned. Comparatively few municipal fire departments would have conveniences and appliances necessary to make the prescribed physical and chemical tests.

A standard specification would destroy the value which at present attaches to various manufacturers’ brands or trade marks as the result of advertising, and the value and worth of the goods sold under these names have been proven by years of experience. Fire hose for municipal service is generally sold with a stated time and pressure guarantee and, while competition in the length of the latter often reaches unreasonable and even ridiculous extremes, we doubt if on the whole any better general results would be achieved by a radical change to a uniform standard specification. When goods are made to specifications furnished by the customer and fulfill all of the prescribed physical, chemical, and other tests upon delivery, it is certainly not reasonable to ask the manufacturer to guarantee the durability of such hose for a stated length of time.

In the case of air brake hose, we think experience has proven that the average hose as supplied under present M. C. B. specifications is not as durable as some grades formerly supplied under various manufacturers’ individual brands, which in some cases were sold at prices less than those that have, until recently, prevailed for M. C. B. standard air brake hose. It seems to us that a uniform fire hose specification is undesirable for the reasons above mentioned and also because it would practically eliminate the advantages which some manufacturers are able to offer as the result of years of experience based on practice and not on theory.

April 8, 1908.

PRESENT GUARANTEE SYSTEM OPPOSED.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have read with a great deal of interest the article in your issue of April 1, entitled “Hoolihan’s Fire Hose Specifications,” and while they are written in a satirical vein, yet I believe them to contain as much common sense as rubber manufacturers are asked to adhere to in making up fire hose to other people’s specifications, and we might also add that this would apply to practically all of the specifications which rubber manufacturers are expected to make rubber goods to, from various other users of such rubber goods. It has always seemed to us to be extremely unfair to be asked to manufacture goods to other people’s specifications and then also guarantee them. We firmly believe that if the manufacturers were fully informed as to the service which the goods are expected to give, and they were then asked to furnish goods to meet these conditions, as well as guarantee them, then it would work for the betterment of all concerned.

April 10, 1908.

WHO SHOULD ASSUME THE GUARANTEE?

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have read “Mr. Hoolihan’s” remarks on fire hose specifications in your last issue. I don’t believe you would care to print my expressions if I were to send them to you either signed or unsigned, but I venture them.

I disagree rather broadly with some of the makers of fire hose with reference to the specifications in question. With one or two exceptions they are the fairest lot of specifications we have ever had submitted to us by any board of underwriters in the past. If the said board of underwriters would make the few changes we would suggest, we would be perfectly willing to agree to make hose to their specifications. One of our objections, of course, is to the time guarantee, simply on the ground that if we follow as a rule any board of underwriters sets out to specify how any hose should be made, then the burden of the guarantee should be on them, and if a time guarantee is to be given, then the manufacturer should be allowed to make the hose any way he saw fit. In other words, the dictator of the specifications should assume the guarantee, but we are so little at odds with reference to this particular set of specifications themselves, we could hardly feel warranted in giving you any expression of opinion that would condemn them as a whole.

I don't believe the trade at large would care to have expressions published that would be as mild in character as ours, as of course the trade as a majority are distinctly averse to the set of specifications in question, and if the trade as a majority can reduce these specifications to a much easier degree upon the manufacturer, we should naturally be perfectly willing to accept as easy specifications as could be evolved. We are none the less perfectly willing to adopt the specifications with a few changes, and so we are not a real important factor in this struggle to have the same materially altered.

April 10, 1908.

SOME BRIEF COMMENTS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: That was a choice bit of ridicule in your April number. Keep "Mr. Hoolihan" busy!

April 4, 1908.

TO THE EDITOR OF THE INDIA RUBBER WORLD: You deserve a vote of thanks from the rubber trade for your "Hoolihan" article. It's a "dandy." Won't you please keep it up?

April 6, 1908.

UNDERWRITERS' SPECIFICATIONS DEFENDED.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Referring to what has appeared in your columns recently on the subject of fire hose specifications, this company believes and advocates the adoption by the National Board of Fire Underwriters of specifications covering the manufacture of fire hose. We feel that the underwriters are justified in taking action to protect their interests relative to purchase of fire hose by different cities.

It is a fact that hose furnished New York city, under specifications governing the placing of recent orders, will guarantee that city the best hose ever placed in fire department service.

I should think it rather peculiar action to criticize an endeavor to purchase the best and to obtain proper values.

New York city specifications are not impractical, but they are severe. We believe hose can be made and will be made in strict accordance with each detail of the required specifications.

April 10, 1908.

LETTERS IN HUMOROUS VEIN.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We saw the report of Mr. Hoolihan in your last issue and at a meeting of our board of directors we decided to insist on an apology from you.

Why should the modest request of the Underwriters be criticized? Their requests are milder than our trade has any right to expect.

Some fire hose has been known to last for ten years, and if one piece can be found that has lasted ten years, why should not all hose last ten years, and if so, why not guarantee it for that length of time?

This is an era of education of the fire hose manufacturers by the underwriters. Away with the old methods and on with the new. The rubber men and cotton men who have been droning over business for ten or twenty years, fooling with the problem, ought to give place to the new scientists. Away with the old trick of frictioning duck and have it "well and properly cemented

to secure adhesion of the liability." That's the best method from the source of life!

Suppose the fire departments don't take care of the hoses. We will ask the bureau to give us a solution. Suppose the new specifications do "test" a few concerns, won't there be plenty left?

The chiefs and fire committees may think they know from experience what kind of hose to buy, but what do they know about "sapontifiable matter" and "antitonic extractum"?

Our corporation has been greatly benefited by a study of the specifications, and especially by that clause which tells us that "in double jacketed hose it is recommended that spiral filler threads be run in opposite directions in the fabric to prevent twist." It is so simple it is a wonder it had not occurred to us.

What if the underwriters incur no risks by the new formulas and guarantees; have they not done enough for us in making specifications for underwriters' mill hose to make us earn to do something for them?

THE WAYBACK COTTON AND RUBBER CO.

N. P. RHOADS, President.

The Crossroads, April 6, 1908.

MR. HOOLIHAN, Overwriters' Inspector, care of THE INDIA RUBBER WORLD—*Dear Sir:* Won't yez plaise come up here and inspect us? The chaff devil in our compounden room ait soome pigs muckles with ice cream on top ov em for desert last noight, and droonk the contents of two bottles labeled by the Overwriters Libothry as "Apple Jack-ass-a-tone extract" and we are afeered that he has pin holes in his loimings.

Coomme quick—we'll pay the frate. Yours trooly,

RUBBER NECK HOSE CO.

Neverleak, N. J., April 4, 1908.

COMMENDED BY AN EDITOR.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your April number appears a very clever illustrated article entitled "Hoolihan's Fire Hose Specifications." We should like very much to reproduce it in our columns, giving you credit therefor, and would also like to know upon what terms we could have the use of the cuts.

An answer at your earliest convenience will greatly oblige.

April 1, 1908.

RUBBER HEELS AND RELIGION.

[LONDON LETTER IN THE NEW YORK "SUN."]

THE strength which religious conviction can attain has lately been illustrated in a curious way to the manufacturers of rubber boot heels trading in Ireland. They have found that when the rubber is corrugated in the form of a cross the sales of these heel pads have been almost nil. This state of affairs was most noticeable in districts where Roman Catholicism predominates.

"It appears," says the manager of one firm of heel pad manufacturers, "that the Celtic belief as to the power of the cross is so strong that the thought of treading it in the dust under one's heel is to be regarded with nothing but horror. In these circumstances we have had to withdraw all stock bearing the objectionable cruciform design and substitute heels which are not calculated to offend religious susceptibilities. It was only recently that we discovered the cause of the widespread refusal to buy heels of our usual design."

Another manufacturer said that in the north of England he had noted an entirely contrary state of affairs. The presence of the cross was considered there an especial reason for buying heel pads.

THE American consul at Colombo reports the exportation of rubber tree seeds from Ceylon to the United States during 1907 of the value of \$2,624. What may have been the exact destination of these seeds is not indicated, but it probably was the territory of Hawaii.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufacturers of india-rubber and gutta-percha for January, 1908, and for the first seven months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
January, 1908.	\$105,717	\$ 85,877	\$280,944	\$472,538
July-December	730,094	1,100,276	1,028,994	3,834,364
Total	\$844,811	\$1,252,153	\$2,209,938	\$4,306,902
Total, 1900-07	691,286	858,714	2,040,592	3,590,592
Total, 1905-06	738,000	1,238,837	1,620,020	3,602,857
Total, 1904-05	530,538	971,261	1,338,168	2,839,967
Total, 1903-04	530,805	828,645	1,401,255	2,760,705

SHIPMENTS TO NON CONTIGUOUS TERRITORIES.

DESTINATION.	Belting, Packing, and Hose	Boots and Shoes.	All Other Rubber.	TOTALS.
<i>Alaska:</i>				
1903.....	\$32,351	\$88,331	\$17,248	\$137,930
1904.....	44,393	130,552	19,337	194,252
1905.....	74,840	168,093	20,431	272,310
1906.....	88,740	187,781	34,471	308,998
1907.....	101,485	192,275	33,377	327,137
<i>Hawaii:</i>				
1903.....	\$37,322	\$7,380	\$30,160	\$74,877
1904.....	20,439	12,030	34,089	75,594
1905.....	25,035	6,624	49,395	78,054
1906.....	40,681	13,934	43,985	98,600
1907.....	50,475	11,650	60,250	131,387
<i>Porto Rico:</i>				
1903.....	\$8,545	\$811	\$10,074	\$25,430
1904.....	8,770	209	16,814	25,859
1905.....	14,608	782	27,516	42,900
1906.....	19,873	750	35,885	56,514
1907.....	20,476	321	37,868	58,665
<i>Philippines:</i>				
1903.....	\$23,044	\$2,576	\$35,261	\$60,881
1904.....	31,593	7,684	42,809	82,146
1905.....	18,981	4,971	33,474	57,426
1906.....	34,758	7,921	42,879	85,558
1907.....	27,196	18,169	50,836	96,201
<i>Totals:</i>				
1903.....	\$101,262	\$99,104	\$98,752	\$299,118
1904.....	114,231	150,541	113,049	377,821
1905.....	133,470	180,440	130,810	450,720
1906.....	184,058	210,392	155,220	549,670
1907.....	199,632	222,421	191,337	613,390

RUBBER AND RUBBER GOODS IN JAPAN.

THE annual return of the foreign trade of the empire of Japan, emanating from the department of finance, at Tokio, contains an official statement of the quantities and values of imports of crude caoutchouc and gutta-percha for three years, as follows:

	Kin.	Pounds.	Yen.	U. S. Money.
In 1904.....	363,941	[487,522]	548,655	[\$270,761.24]
In 1905.....	547,377	[725,275]	845,950	[\$417,476.33]
In 1906.....	454,296	[601,942]	585,189	[\$288,790.77]

It is interesting to note the sources of the rubber imported. The greater part has come from the Far East, though it by no means follows that the rubber really originated there, any more than that the rubber credited to the United States was produced in North America. But undoubtedly the tendency is to derive rubber from the producing countries nearest to Japan, and ultimately, no doubt, all the various grades needed will be available not far from Singapore. The details of sources of rubber imported during 1906 follow:

	Kin.		Kin.
British India.....	31,256	Mexico.....	1,230
Straits Settlements.....	260,588	Other countries.....	12,327
Dutch East Indies.....	29,279		
Germany.....	4,509	Total, 1906.....	454,296
Great Britain.....	73,983	Total, 1905.....	547,377
United States.....	41,124	Total, 1904.....	363,941

The statistics of the imports of manufactures of rubber are not very comprehensive. The following items, however, may be of general interest, the figures indicating values in the yen, which is slightly less than 50 cents gold:

BELTING AND HOSE FOR MACHINERY.

	1904.	1905.	1906.
Great Britain.....yen	104,133	228,341	207,009
Germany.....	59,814	79,395	129,458
United States.....	34,442	30,663	62,323
Other countries.....	28	1,704	2,351
Total.....	198,417	340,013	401,141
In U. S. Currency.....	\$97,918	\$107,796.42	\$197,963.08

PACKING FOR STEAM ENGINES.

	1904.	1905.	1906.
Great Britain.....yen	170,915	183,142	262,172
Germany.....	74,715	73,091	66,720
United States.....	25,040	23,005	30,694
Austria-Hungary.....	1,596	6,252	11,301
Italy.....	8,998	13,206	12,921
Belgium.....	548	.....	4,489
Other countries.....	868	1,448	4,666
Total.....	283,589	300,144	392,963
In U. S. Currency.....	\$139,951.17	\$148,121.06	\$193,927.24

SUBMARINE CABLES.

	1904.	1905.	1906.
Great Britain.....yen	995,987	2,502,408	102,663
Germany.....	30,624	42,156	68,455
France.....	10,350	24,334	26,091
United States.....	.....	.....	10,432
Other countries.....	.....	276	.....
Total.....	1,036,961	2,569,174	207,641
In U. S. Currency, \$511,740.25	\$1,267,887.37	\$102,470.83	

Exports of Japanese manufacturers of india-rubber are not included in this compilation, and doubtless the volume of such trade is very small. There are, however, a number of entries of "foreign produce" exported under the heading "Caoutchouc," notably 2,177 yen to China, 5,085 yen to Corea, 280 yen to Russia, 83 yen to the Philippines, 2,181 yen to Great Britain, 2,071 yen to Germany, and 1,808 yen to the United States. It is quite possible that the last three items relate to goods returned to the countries of manufacture.

NEW TARIFF FOR NEW ZEALAND.

THE New Zealand tariff act of 1907 discriminates in favor of British products in the case of a number of articles of import. Thus all kinds of rubber footwear are dutiable at 33¼ per cent. *ad valorem*, in the general tariff, and at 22½ per cent. if imported from Great Britain. Rubber belting and fire hose are dutiable at 10 per cent., and admitted free if of British manufacture. Other rubber hose is dutiable at 20 per cent., and free if made in any British possession. Most rubber goods, however, are not subject to any duty. Articles specifically mentioned as free are dental rubber, waterproof material in the piece, boot elastics, rubber heels, rubber cement, all rubber tires and tire parts, packings, and rubber gloves.

THE manufacture of fountain and stylographic pens in the United States is treated in Bulletin No. 85 of the industrial census of 1905. The number of establishments making them was 33, with a combined capital stated at \$1,097,825. The number of fountain pens manufactured during the census year 1905 is reported at 20,975 gross [=4,316,400], compared with 8028 gross [=1,156,032] for the year covered by the census of 1900. The value of fountain pen products for the two years was \$1,808,163 and \$902,734 respectively. Since the principal bulk of a fountain pen consists of hard rubber, it will be seen that this industry is of considerable importance as an outlet for the rubber factory products.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED MARCH 10, 1908.

- N**O. 881,152. Overshoe. E. P. Rickett, Cleveland, Ohio.
 881,218. Truss pad. F. R. Bathrick, Akron, Ohio.
 881,338. Insufflator. S. Hasbrouck, Providence, R. I.
 881,366. Hose or pipe coupling. S. D. Barnett, Newark, N. J.
 881,410. Valve stem and tire deflation alarm. A. L. Kay, Chicago.
 881,651. Tire wire pulling machine. J. A. Barbrake, Canton, Ohio.
 881,746. Hose coupling. J. M. Foyne, East Orange, N. J., assignor to Safety Car Heating and Lighting Co.
 881,830. Hose coupling. W. Skerman, assignor to T. C. Lohner and N. J. Kessels, all of Brisbane, Australia.

Trade Marks.

- 28,352. Eberhard Faber, New York city. The words *Eberhard Faber*. For rubber bands and erasers.
 28,449. *Same*. The words *E. Faber*. For rubber bands and erasers.
 30,020. National India Rubber Co., Bristol, R. I. The representation of an anchor, surrounded by the name of the company, within a diamond shaped border. For rubber footwear.
 31,531. A. A. Cutter Co., Eau Claire, Wis. The letter C, beneath the name of the company and over their address. For rubber and other footwear.

ISSUED MARCH 17, 1908.

- 881,905. Armlet for pneumatic tires. T. O. Croger, assignor of one-half to C. H. Edgcomb, both of Chicago.
 881,909. Wheel [with pneumatic tire and rim therefor]. M. D. Drake, Beard, Ky.
 882,057. Life belt. L. Forte, Paris, France.
 882,268. Cushion heel. R. W. Perry, Stoneham, assignor of one-half to G. H. Stevens, Melrose, Mass.
 882,312. Apparatus for facilitating the putting on of india-rubber gloves. C. A. Hoefftke, London, England.
 882,347. Method of curing or vulcanizing rubber goods. [Particularly the outer casing of pneumatic tires.] C. L. Pepper, Indianapolis, Indiana.
 882,423. Shaving brush [having a body of sponge rubber]. S. Saloman, Washington, D. C.
 882,497. Hose coupling. E. Gonnell, Manitowoc, Wis.
 882,503. Air hose coupling. W. W. Kilpatrick, assignor to Air Brake and Steam Heat Connection Co., both of Atlanta, Ga.

Trade Marks.

- 25,235. The Dextine Patent Packing and Rubber Co., Ltd., London, England. The word *Dextine*. For rubber sheeting.
 25,508. John H. Parker, Malden, Mass. The words *John H. Parker's Rubber Upper Leather Sole Boot*. Pat. Sept. 11, 1888, the name and the patent date arranged to form a circle, enclosing the remaining words. For combination rubber and leather footwear.

ISSUED MARCH 24, 1908.

- 882,680. Cap for the protection of the human head. R. Ireland and H. W. Cole, Kalgoolie, Western Australia.
 882,690. Hose coupling. T. N. Jones, Boulder, Colo., assignor of one-half to J. T. Powers, Hastings, Nebr., and one-fourth each to N. S. Shannon and W. H. Ferguson, Lincoln, Nebr.
 882,905. Pneumatic tire. [Inner tube provided with truss shaped folds, designed for yielding before a puncturing article and for pressing the edges of a puncture in one of said folds against each other.] E. A. Marsh, Detroit, Mich.
 883,040. Submarine boat. [With inflatable air bags on the outside, for maintaining communication with the surface of the water.] F. Mott, Shabbona, Mich.

Trade Marks.

- 25,248. American Hand Sewed Shoe Co., Omaha, Nebr. The representation of the feet of a man walking, having on them a pair of rubbers, and also a rubber sole shown separately. For rubber footwear.
 32,108. Pneumatic Rocker Tire Co., Denver, Colo. A fancy design having the letter B for its center. For pneumatic treads for rocking chairs.

ISSUED MARCH 31, 1908.

- 883,186. Hose bridge. [For use over car tracks at fires.] J. Fine, Louisville, Ky.
 883,220. Clamp for gas hose. W. H. Middlebrook, Southport, Conn., assignor of one-half to J. P. Osterhoudt, Kingston, N. Y.
 883,290. Sole for boots and shoes. O. C. Davis, Brockton, Mass.
 883,320. Double masser and medicator. [With ear and nose tubes.] C. H. Murray, Macon, Ga.
 883,398. Flexible tire for vehicle wheels. C. C. Gouin, Paris, France.
 883,572. Pneumatic tire shield. [Removable; composed of interjoined links formed of round wires.] F. W. Savage, Granville, N. Y.
 883,573. Felt boot or sock. *Same*.

Trade Marks.

- 25,923. Sanderson & Roosa, Lincoln, Nebr. The representation of a woman in athletic costume, lettered Y. H. C. A. For rubber footwear and athletic goods.
 25,924. *Same*. The representation of a man in athletic costume, lettered Y. M. C. A. For rubber footwear and athletic goods.
 27,057. Wolverine Brass Works, Grand Rapids, Mich. The word *Wolverine*. For rubber plumbers' supplies.
 31,807. Nicotine Golf Ball Co., Chicago. The representation of a smoking pipe. For golf balls.

- 32,126. Charles Neugebauer & Sons Co., Malden, Mass. The word *Congress* printed as in stencil marking. For linen hose.
 32,127. *Same*. The word *Lincoln* printed as in stencil marking. For linen hose.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906.

*Denotes Patents *per American Inventions*.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 4, 1908.]
 25,041 (1906). Non slipping tread band for pneumatic tires. H. J. Scott and J. E. T. Buchanan, London.
 25,060 (1906). Small rollers to prevent side slipping of rubber tired wheels. A. Wheatcroft, London.
 25,099 (1906). Former for making pneumatic tires. T. Sloper, Devizes, Wiltshire.
 25,121 (1906). Washer for water taps. E. Rhodes, Burnley.
 25,150 (1906). Rubber enclosure piston for syringes or pumps. T. R. Hughes, Bushy Heath, Herts.
 25,231 (1906). Special wheel to prevent side slipping of rubber tired vehicles. E. W. Oxborrow, Brighton.
 25,281 (1906). Chain placed in center of pneumatic tire treads to prevent slipping. G. E. A. Holdsworth, London.
 25,306 (1906). Method of rendering flexible cables having induction coils inserted in their length. Siemens Bros. & Co., London, and W. Dieselhorst, Old Charlton.
 25,321 (1906). Tire having an ordinary cover enclosing a solid elastic core. M. Brossé, Paris, France.
 25,349 (1906). Mechanism for winding rubber for golf balls and the like. W. U. and J. R. U. Morton, Glasgow.
 25,431 (1906). Covers for protecting rubber springs of railway and other trucks. J. Levick, Aston.
 25,436 (1906). Tire carrying rim with detachable flanges. V. H. and F. C. Minton, Erdington, Warwickshire.
 25,502 (1906). Apparatus for vulcanizing india-rubber upon vulcanized rubber goods. F. H. Hadfield and G. W. P. Johnston, London.
 25,638 (1906). Security bolt for pneumatic tires. Dunlop Pneumatic Tyre Co., Ltd., and R. M. Hanlon, London.

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 11, 1908.]
 26,713 (1906). Rim comprising a detachable flange, and tire cover made with reinforcing fabric. P. M. Jusice, London (J. Thomson, New York).
 25,735 (1906). Alkali process of separating impurities from waste rubber to be reclaimed. P. Alexander, Berlin.
 25,835 (1906). Series of metal boxes secured to the side of a tire to prevent slipping. H. Crouchley, London.
 25,866 (1906). Cycle pedal interchangeable from the rap trap to the rubber type or vice versa. W. E. Hunn, Liverpool.
 25,881 (1906). Coating preparation for the walls of rubber or other pipes to render them impermeable. Soc. Anon. le Circoum, Paris, France.
 25,010 (1906). Vehicle wheel having spokes, each formed by winding together two wires on a rubber mandrel. M. Stott, Oldham.
 25,952 (1906). Method of filling tires under pressure with plastic matter. L. C. G. Lesage, Paris, France.
 25,958 (1906). Disks for securing type or type bars in printers' galleys. J. F. Chapter, Beckenham, Kent.
 26,053 (1906). Vehicle wheel, with pneumatic tire enclosed in an eccentric shell carrying the tire proper. G. D. Ross, Glasgow.
 25,084 (1906). Heel protector. H. W. Bramley, Ilford, Essex, and J. L. Tannar, London.
 26,110 (1906). Resilient vehicle hub comprising a rubber cushion. E. Chevillard and J. Kucharek, Paris, France.
 26,158 (1906). Apparatus for vulcanizing repairs of tires and tubes. W. Frost and H. Frost & Co., London.
 26,161 (1906). Security bolt for attaching pneumatic tire to rim. W. E. DuCros, London.
 26,168 (1906). Rim with detachable flange for pneumatic tires. *Same*.
 26,179 (1906). Vehicle wheel with outer and inner metal rims, with rubber bands interposed. D. Levi, Paris, France.
 26,217 (1906). Anti skid device for twin solid rubber tires. J. C. Berry, Nottingham.
 26,273 (1906). Elastic tire. F. J. Chary, Paris, France.
 *26,310 (1906). Heel of rubber and fabric layers. H. H. Lake, London (C. C. Beebe, North Brookfield, Massachusetts).

- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 18, 1908.]
 26,316 (1906). Solid tire formed of rubber segments, gripped by two grooved retaining rings attached to the felloe by bolts. J. Slee, Newton-le-Willows, Lancs.
 26,256 (1906). Tire rim with detachable flanges. H. and A. T. Reid and J. Riekie, Glasgow.
 26,362 (1906). Revolving heel pad. A. E. Bigg, Manchester.
 26,409 (1906). Heel pad to be worn inside the boot. J. M. Jacquemin, Lyons, France.

- 26,417 (1906). Sink detector for detecting punctures in tires. C. Long, Glanorgan.
- 26,480 (1906). Solid tire made of rubber continuous or in segments. Hartridge Tire Syndicate and A. W. Torkington, London.
- 26,500 (1906). Solid tire with the base grooved to facilitate applying it to a rim, designed to hold it by impression. A. B. Lundeemann, Ludwigshausen, Germany.
- 26,512 (1906). Detachable rim for tires. J. Henderson, Banton, Somersetshire.
- 26,531 (1906). Resilient tire formed of rubber core, groups of springs, and a cover of rubber and fabric. H. Gilardoni and H. Leriche, Paris, France.
- 26,533 (1906). Heel protector. H. Rosenthal, Budapest, Hungary.
- 26,651 (1906). Resilient tire. J. S. Cushing, Norwood, Massachusetts.
- 26,660 (1906). Solid rubber tire with tubular metal studs to prevent slipping. C. Brown, London.
- 26,722 (1906). Tire with rubber studs to prevent slipping. E. W. Coleman, Twickenham.
- 26,731 (1906). Method of vulcanizing rubber in tire repairs. W. Frost and H. Frost & Co., London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MARCH 25, 1908.]

- 26,731 (1906). Tire cover or protective band in which gutta-percha or balata is used. J. E. Audsley, of R. & J. Dick, Ltd., Glasgow.
- 26,762 (1906). Puncture proof tire cover. H. and P. H. Thorne, Leeds, and W. Blamires, Huddersfield.
- 26,773 (1906). Pneumatic tire covers, driving belts, and the like, made in part of asbestos treated with balata. W. Watson, Thornton Heath, Surrey.
- 26,991 (1906). Non slipping tire cover. F. Sabatier and R. Ruwet, Brussels, Belgium.
- 27,160 (1906). Pneumatic tires prevented from slipping and puncture by metal pieces secured over the tread by side chains. G. Stockdale, Arnold.
- 27,179 (1906). Tire built up of blocks of rubber. A. S. Morrison, London.
- 27,236 (1906). Tire tread formed of blocks of rubbered canvas set on edge. British Insulated and Helsby Cables, Ltd., Prescott, and J. Johnstone, Helsby.
- 27,340 (1906). Method of weaving rubber proofed fabrics for use in waterproof garments. J. and H. Weinberg, Manchester.
- 27,366 (1906). Composite elastic tire. S. Hey, Keighley (Mitchell Punctureless Pneumatic Tire Co., Swampscott, Massachusetts).
- 27,382 (1906). Protected non skid cover of chain mail. S. A. Marazgani, Palermo, Italy.
- 27,437 (1906). Detachable tire rim. G. Baillie, London.
- 27,475 (1906). Vehicle wheels with revoluble tire segments threaded on the felloes. W. Younger, Brighton.
- 27,481 (1906). Tire inflating pump operated by the motor. J. Bacon, Croydon.
- 27,485 (1906). Tire puncture preventing band of metal. C. Schwalb, Gledesberg a/R., Germany.
- 27,509 (1906). Golf club head formed of a metal shell in which is inserted gutta-percha or india-rubber. C. T. Thompson, Philadelphia, and F. P. Mitchell, Laurel Springs, New Jersey.
- 27,516 (1906). Flat sectional molds for vulcanizing rubber hose, belting, and the like. H. Z. Cobb, Chelsea, Massachusetts.
- 27,533 (1906). Chain loops to prevent tires from slipping. E. F. Law, London.
- 27,536 (1906). Metal shield for tires. H. G. Wheeler, Canandaigua, New York.
- 27,568 (1906). Method of attaching tire cover to rim. F. Reddaway & Co., and A. E. Greene, Pendleton, Lancs.
- 27,577 (1906). Tire rim with detachable flange. E. P. Proud, Dublin.
- 27,585 (1906). Balata or other band passing round the driving wheel of a vehicle and round a road guide wheel, to prevent slipping. H. Bird, London.
- 27,616 (1906). Rubber substitute composed of gelatin, glycerine, and formaldehyde. B. Sauton, Paris, France.

THE FRENCH REPUBLIC.

Patents Issued (With Dates of Application).

- 380,863 (Aug. 16, 1907). G. Suchy. Pneumatic tire with multiple air chambers.
- 380,876 (Aug. 17). Z. Olsson. Process for the manufacture of an elastic material suited for tire tubes.
- 380,755 (Aug. 16). E. Teste. Protective cover for flasks.
- 380,698 (Oct. 25, 1906). J. Guerry. Process of reclaiming vulcanized rubber.
- 381,008 (Aug. 20, 1907). J. M. Piquerra. Mold for forming pneumatic tires.
- 381,053 (Aug. 21). Zelgins and Nordon. Elastic wheel.
- 381,109 (Aug. 23). A. Bon and J. Lamed. Elastic wheel and tire.
- 380,973 (Aug. 8). G. E. Smith. Improvement in rubber shoes.
- 381,166 (July 26). A. B. Shaw. Improvement in pneumatic tires.
- 381,207 (Aug. 19). F. Amoudru. Protective tire tread.
- 381,316 (Aug. 20). C. Falcemier. Wheel tire.
- 381,346 (Aug. 20). J. Byrom. Tire protector.
- 381,384 (July 17). E. Kempshall. Pneumatic tire.
- 381,537 (Sept. 5). C. Lang and Bidault. Elastic tire.
- 381,544 (Sept. 6). Delahaye & Co., Ltd. Method of repairing tires on demountable rims.
- 381,624 (Sept. 7). T. C. Martin. Tire protector.
- 381,660 (Sept. 9). T. Sloper. Process of forming pneumatic tires.
- 381,666 (Sept. 10). J. Blanc. Pneumatic tire.

- 381,695 (Sept. 10). F. Fuchs. Pneumatic tire.
- 381,702 (Sept. 10). R. Moune and G. Raillot. Leather cover for pneumatic tires.
- 381,768 (Sept. 11). L. G. Parant Pinel. Pneumatic tire.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Babet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

COPPER PRICES FOR TWENTY-THREE YEARS.

THE figures which follow are obtained from a table compiled by The Wire and Telephone Co. of America (Rome, New York), showing the years 1884 to 1907, inclusive. The table herewith gives for each year (1) the average for January; (2) the average for December; (3) the highest average for any month; (4) the lowest average for any month; and (5) the average for the year:

YEAR.	Jan.	High.	Low.	Dec.	Average.
1884.....	.15	.15	.11 ⁷ / ₈	.11 ⁷ / ₈	.14 1/32
1885.....	.11 ¹ / ₄	.11 ¹ / ₂	.11	.11 ¹ / ₄	.11166
1886.....	.11 ¹ / ₂	.12	.10 ¹ / ₈	.12	.111458
1887.....	.11 ⁵ / ₈	.17	.10	.17	.11323
1888.....	.10 ¹ / ₂	.17 ¹ / ₂	.10	.17 ¹ / ₄	.16 25/32
1889.....	.17 ¹ / ₈	.17 ¹ / ₈	.11	.14 ¹ / ₄	.137395
1890.....	.14 ¹ / ₂	.17	.14 ¹ / ₄	.16	.15 13/16
1891.....	.15	.15	.11	.11	.13 3/32
1892.....	.11	.12 ¹ / ₄	.10 ³ / ₄	.12 ¹ / ₄	.11 5/8
1893.....	.12 ¹ / ₈	.12 ¹ / ₈	.10 ³ / ₄	.10 ³ / ₄	.10 25/32
1894.....	.10	.10	.09 ⁷ / ₈	.09 ⁷ / ₈	.095416
1895.....	.10	.12	.10 ⁵ / ₈	.10 ³ / ₄	.10 13/16
1896.....	.10	.13 ³ / ₈	.10	.13 ³ / ₈	.10979
1897.....	.11 ⁷ / ₈	.12	.10 ⁷ / ₈	.11	.11 1/3
1898.....	.11 ¹ / ₈	.13	.11 ¹ / ₈	.13	.12 1/6
1899.....	.15	.18 ¹ / ₂	.15	.16 ³ / ₄	.17802
1900.....	.16 ¹ / ₂	.17	.16 ¹ / ₄	.17	.16656
1901.....	.16 ⁵ / ₈	.17	.14 ⁷ / ₈	.14 ⁷ / ₈	.16729
1902.....	.11 ⁵ / ₈	.12 ³ / ₄	.11 ⁵ / ₈	.11 ³ / ₄	.12135
1903.....	.12 ¹ / ₂	.15 ¹ / ₄	.12 ¹ / ₂	.12 ¹ / ₂	.13791
1904.....	.12 ³ / ₄	.15 ¹ / ₈	.12 ¹ / ₂	.15 ¹ / ₈	.1325
1905.....	.15 ¹ / ₂	.16	.15 ¹ / ₈	.16	.16093
1906.....	.18 ³ / ₄	.23 ¹ / ₂	.18 ¹ / ₂	.23 ¹ / ₂	.19812
1907.....	.25 ¹ / ₄	.26	.13 ⁵ / ₈	.13 ³ / ₄	.21177

THE RUBBER-KNOBBED TIRE.

IT is true that rubber knobs wear off in time, but so would anything wear if put to the severe strain automobile tires are subjected to; but the wearing off of the knobs on the tread does not wear the tire, does not mean that the tire has lost its non-skid qualities, for when the center or tread has worn smooth the side knobs come into play, and perform their duty so well that a rubber-knobbed tread tire is a non-skid tire until it is entirely worn out, after which it can be re-treaded and is as good as new. If you will follow along a sand road behind a metal-studded tire, you will observe how it throws the sand out from under the tires as it grips the earth, and if you will dismount and examine the roadbed you will find it has cut into the sand, and left a track similar to that made by a heavy article being dragged along. Now follow the rubber-knobbed if you please, and you will note the absence of dirt being scooped up and thrown out behind the tires. Again dismount and look at the road, and you will find the imprints of each little knob as perfect in the sand as though they had been pressed there in a careful manner. This will prove to you, beyond the question of a doubt, that the rubber knob is more perfect, is more perfect in its action, more satisfactory as to results, and by far less injurious to the roadbed. Another feature of the rubber knob is that it is less liable to puncture than any other type, as the flexible rubber of the knobs will throw off 90 per cent. of the nails or pieces of gears one ordinarily jacks up, and which in nine cases out of ten would puncture an ordinary tire.—*Motor Talk (London).*



GEORGE B. HODGMAN,
Vice President.



HENRY C. BURTON,
President.



EDWARD E. HUBER,
Secretary.

Annual Dinner of the Rubber Sundries Trade.

ONCE a year members of the Rubber Sundries Manufacturers' Association gather in New York and hold two meetings—one in the forenoon, when officers are elected and routine business transacted, and one in the evening, which is the annual banquet. Both of these meetings this year fell on the 9th of April. The officers elected were: Henry C. Burton, of Parker, Stearns & Co., president; George B. Hodgman, of the Hodgman Rubber Co., vice president; Frederick H. Jones, of the Tyer Rubber Co., treasurer; and E. E. Huber, of the Eberhard Faber company, secretary.

The second gathering, which took place at Delmonico's, began with an informal reception in one of the cosy parlors on the second floor, after which, at 7:30 o'clock, the members and guests proceeded to the banquet hall. It should be remarked just here that this association, which rarely gathers more than 40 diners at once, has a reputation for the elegance and good taste shown in every detail of its dinners. The 1908 banquet in no way fell behind those of the previous years. Four long tables arranged in a hollow square were laid for the feasters. This whole square, filled with flowers, showing a perfect riot of color, suggested the sunken gardens that date back to the gorgeous feasts of the ancients. In each place was a hand painted menu, upon which was lettered in gold the name of the member or guest. The dinner itself was as good as Delmonico could serve, which is saying very much, and it was enlivened by excellent music from an orchestra and by an occasional solo by a young man who was in particularly good voice.

Just as coffee was served, Mr. H. E. Raymond, the retiring president, arose and spoke in a most interesting vein, reviewing the work of the association and giving deserved praise to work done by Mr. Henry C. Burton, the new president. He also took occasion to compliment Mr. Jones and Mr. Huber for the very effective manner in which they handled the business details. He paid a fitting and much appreciated tribute

to the memory of the late George F. Hodgman, who during his life was one of the staunch supporters of the association, and at his suggestion all present silently raised their glasses and toasted the memory of one whom they all loved and will not soon forget.

Mr. Burton as president and toastmaster was exceptionally happy, and spoke with dignity and purpose. He paid a fine tribute to the preceding presidents, Messrs. Corson, Davol, Hodgman, and Raymond, and suggested that the secretary send to Mr. Corson, the first president, an appreciative letter outlining the association's progress and reporting the evening's proceedings.

At the close of his speech Mr. Burton introduced the Editor of THE INDIA RUBBER WORLD, who spoke briefly of his experience in the druggists' sundries business 25 years ago.

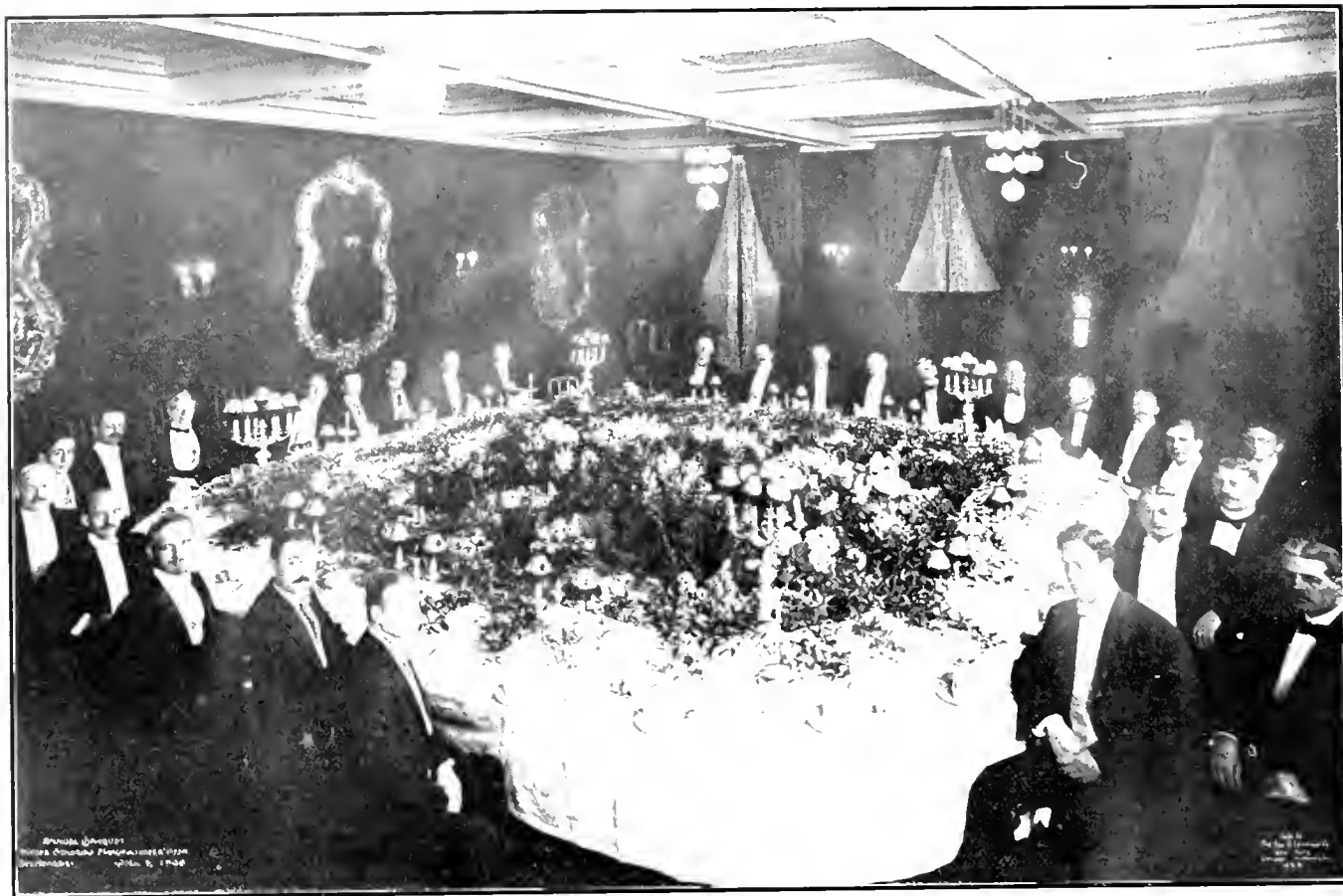
Mr. A. M. Paul, the youngest recruit to the ranks of the association, was next introduced and made an exceedingly good five minutes' speech eulogizing the work of the association and showing himself to be in the fullest sympathy with its aims.

This ended the speech making, as it is an unwritten law that only brief addresses shall be made and those wholly of an impromptu character. It did not, however, end the evening's entertainment, for, leaving the beautifully decked tables, the company gathered in front of a miniature stage and were greeted by a young man who did marvelous slight of hand tricks, keeping up a running fire of comment and explanation in the most delightful vein. He was followed by a monologist and singing artist, who, in Irish dialect, did some exceedingly good work. He in turn made way for a soloist who sang character songs, and, as a grand finale, a series of moving pictures were thrown upon a screen. One of these, which pictured the destruction of a great French factory by fire, was one of the most realistic and thrilling presentations that could be imagined.

At the close of this, with a final hand shake to the president, and mutual felici-



FRED. HALL JONES,
Treasurer.



BANQUET OF THE RUBBER SUNDRIES MANUFACTURERS' ASSOCIATION—DELMONICO'S, NEW YORK.

tations, and congratulations upon the success of the dinner, the company departed.

Looking at the dinner in retrospect, many interesting details come to mind, such as the souvenir that each guest will long preserve as a remembrance of an unusually pleasant occasion. It was a beautiful stein or "jack" made of leather with gold lining, the brim in silver, and on a shield in front the initials of the association and the date. This was delivered in an elegant plush bag bearing the well known trade mark of the Gorham Manufacturing Co.

There were present some 30 diners and guests, the companies represented being The B. F. Goodrich Co., Tyer Rubber Co., Hodgman Rubber Co., Eberhard Faber, Davol Rubber Co., Davidson Rubber Co., Seamless Rubber Co., Parker, Stearns & Co., National India Rubber Co., Vant Woud Rubber Co., and Goodyear's India Rubber Glove Manufacturing Co.

RUBBER AND PROGRESS IN PERU.

A RECENT visitor to Peru was Mr. Charles P. Knill, treasurer of the Peru-Para Rubber Co. (Chicago). He went in the interests of the company named, which controls large rubber grants on tributaries of the upper Amazon, in the department of Loreto. Mr. Knill gathered no little information of interest to rubber men. Ocean steamers, as is known, ply regularly between New York, European ports and Iquitos, the inland port and rubber metropolis of Peru, situated 1000 miles up the Amazon and within easy reach of important rubber producing properties.

Over 7000 passengers arrived in Iquitos during 1907, almost solely in the interest of rubber. Twenty-seven dealers in that city exported nearly 700,000 pounds of rubber of all grades

during the year, of which more than two-thirds were of the grades known as "Para," and the balance "caucho." The importance of rubber to Iquitos is indicated by the fact that during the year 540 steamers weighed anchor at that port, their principal business being that of carrying in supplies and carrying out rubber.

The government of Peru has become very energetic in the development of its resources and this is particularly true as applied to the Loreto region. One of the principal rivers in this district is the Ucayali, which flows into the Amazon at Iquitos, and is navigable for ocean steamers for 800 miles from that port. The government and rubber *concessionaires* are rapidly redeeming this country by modern business methods and in the building of roads, bridges, and the like.

There is a large amount of American capital invested in Peru. This capital has, in the past, been employed about equally in the mining and rubber industries and the railroad development of that country, but there seems now to be a decided tendency in favor of rubber. The Peru-Para Rubber Co. is fortunately located on the Blanco river, which admits of the passage of 200 ton steamers, and is an affluent of the Ucayali, navigable for ocean steamers, and is between 200 and 300 miles from Iquitos, thus making possible continuous water transportation from its property to New York or Europe.

Mr. Knill reports very favorably in regard to the affairs of the company and through Oscar Mavilla, a former Peruvian naval commander of note, and who is in charge of the work on this property, states that the building of the roads which connect the property with other districts is progressing rapidly and that very soon a large territory will be able to avail itself of reaching the market in quick time by the use of these roads and the rivers running through the company's property.

New Rubber Goods in the Market.

"ELITE" HAIR WAYER OR CURLER.

THE illustration herewith relates to a small article recently patented which gives indications of becoming very popular. Among the advantages which it possesses is that, being in one piece, there are no parts to lose. There is moreover no knob or button to catch in the hair. It is unbreakable,



THE "ELITE" HAIR WAYER.

with care will last for years, and does not cut, pull or break the hair. This curler can be removed from the hair without unwinding. Not a few of these advantages are due to the fact that the "Elite" is made of good rubber. [Schacht & Co., Elkhart, Indiana.]

RUBBER HEELS WITH FRICTION PLUG.

It is claimed that rubber heels with so called friction plugs inserted in the rubber at the rear make one's footing more secure and lengthen the life

of the heel. Special advantages are claimed for placing the friction plugs, instead of at the center of the heel, close to the outer edge, where the greatest wear occurs. The manufacturers of the heel here illustrated state that particularly tough and springy rubber is used in its construction. These heels are furnished in all the usual sizes in either black or gray rubber. This friction plug



FRICTION PLUG HEEL.

heel is sold through the leading jobbers of the trade, and made by the extensive rubber manufacturing firm of Morgan & Wright, of Detroit, Michigan.

"BUCKEYE" SOAP TRAYS.

THE rubber soap tray the construction of which is illustrated in the accompanying cut is made $3 \times 4\frac{1}{2}$ inches in size, and supplied in two colors—red and gray. It is very neat in appearance and referred to as being superior to metal or glass. It is supplied to the trade by the manufacturers, the Springfield Tire and Rubber Co., Springfield, Ohio.



"BUCKEYE" SOAP TRAY.

THE DETACHABLE TWIN RUBBER HEEL.

A RECENTLY patented rubber heel is attached to the leather shoe by means of a steel plate which is applied to the leather and held in position by screws. The rubber heel is recessed to fit the steel plate, and is stretched on over it, contracting when put on so as to remain firmly in place. No nails are used to hold on this heel—thus avoiding the danger of scratching floors—and the absence of nail holes lessens the liability of the heel to take up and carry mud. The

heel may be transferred from one shoe to another, since not even cement is used to hold the rubber in place. The Detachable Twin Heel is marketed by a new company, the Detachable Twin Heel Co. (No. 28 School street, Boston), who have a factory at Lynn, but are reported to be planning to remove to Saugus, Massachusetts.

"RED CROSS" LUMBERMAN'S OVER.

THE "Red Cross" combination top lumberman's over, while first introduced to the trade several years ago, has undergone

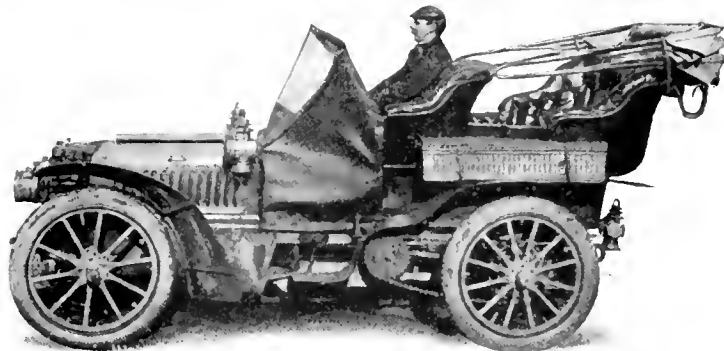


"RED CROSS"
LUMBERMAN'S OVER.

various improvements from time to time, making it continually a more desirable article of footwear. The top is made of extra heavy waterproof goods and boarded leather, and the bottoms of lumberman's overs made by a leading rubber company. These goods are made with 8 inch, 11 inch, 14 inch, and 17 inch leather tops. [Hirth-Krause Co., Grand Rapids, Michigan.]

THE AUTO WIND SHIELD.

THE cut here illustrates the appearance and method of applying a new automobile wind shield, designed to protect the motorist while at the same time giving him a full and unobstructed view of the road. This shield is mentioned as being preferable to a shield of glass or other transparent material, which is liable to become covered with mist or dust, or to give a bad reflection of light. It accomplishes this protection, while occupying a position below the line of vision of the driver, by



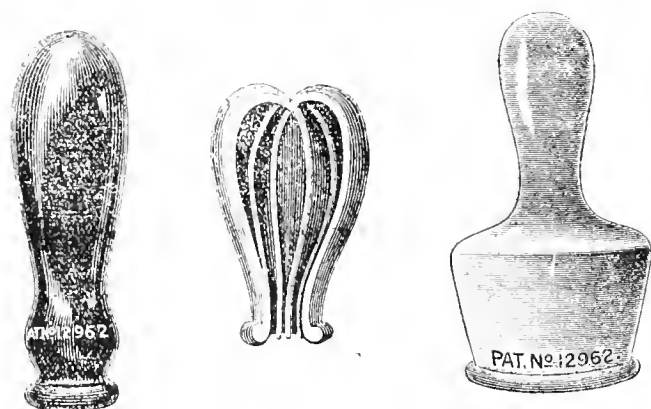
THE AUTO WIND SHIELD.

being so curved that the currents of air striking on the front of the machine are deflected outward and upward, carrying wind or dust over the occupant's head and giving absolute protection to the face and eyes as well as the hands and body. The Auto Wind Shield is intended to do away with the necessity of goggles or protection for the face; makes possible smoking with comfort; and avoids danger incident to the use of plate glass fronts. [The Auto Wind Shield Co., Cambridge, Massachusetts.]

NON-COLLAPSIBLE SEAMLESS NIPPLES.

THE feature of particular interest in the accompanying illustration is the central figure, designed to illustrate the interior construction of a patented self cleansing non collapsible nipple

for children's bottles, which is of British origin. Among the advantages which this article is referred to as possessing is that the internal arrangement of ribs is such that with merely rub-

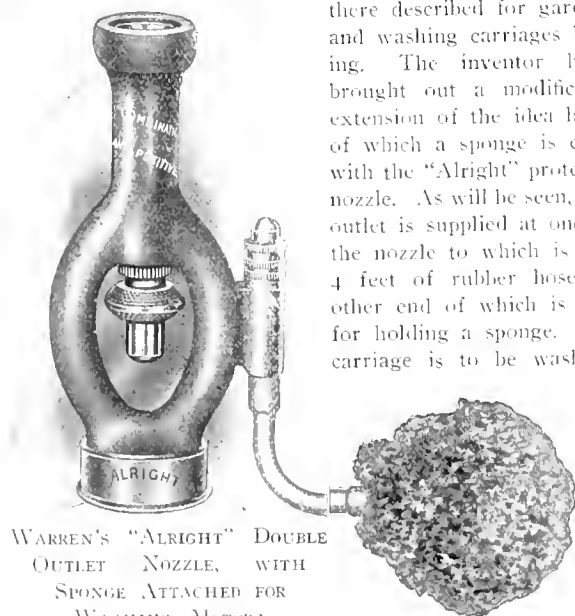


SELF-CLEANSING, NON-COLLAPSIBLE NIPPLE.

bing the nipple a few times between the thumb and forefinger in warm water it becomes perfectly clean. The form of construction involved also prevents the nipple from collapsing and thus stopping the flow of milk (which often occurs with other makes), as the channels never become entirely closed. [Leyland and Birmingham Rubber Co., Limited, Leyland, England.]

NEW DEVICE FOR WASHING CARRIAGES.

In the issue of this journal for March 1 (page 100) was described Warren's "Alright" protection tip nozzle, designed as there described for garden hose and washing carriages by flushing. The inventor has now brought out a modification or extension of the idea by means of which a sponge is combined with the "Alright" protection tip nozzle. As will be seen, a special outlet is supplied at one side of the nozzle to which is attached 4 feet of rubber hose, at the other end of which is a device for holding a sponge. When a carriage is to be washed with



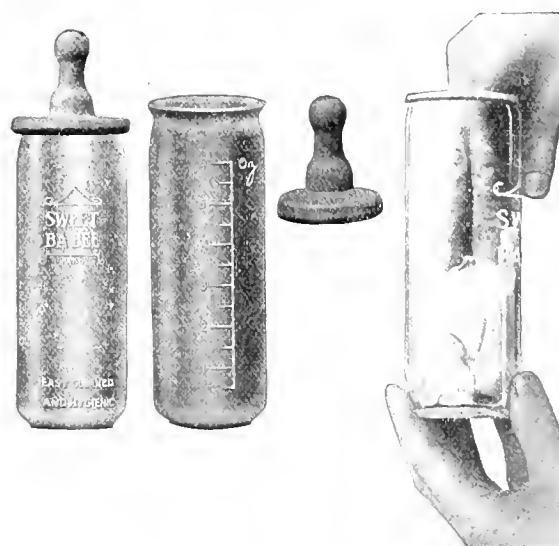
WARREN'S "ALRIGHT" DOUBLE
OUTLET NOZZLE, WITH
SPONGE ATTACHED FOR
WASHING MOTORS
AND CARRIAGES.

the use of this whole device, the rate of outflow can be adjusted satisfactorily, after which the person in charge of the work can take the sponge in hand and use it as long as desired, with a constant and quick supply of water assured and at the same time without waste of water. The engraving here is not designed, of course, to show the whole length of hose. [Marion Warren Co., Rochester, New York.]

"SWEET BABEE" NURSING BOTTLE.

In describing this new article attention will be given first to the bottle, which differs radically in shape from those already in general use. Not only is it readily filled without the use of a funnel, but it is cleaned easily with a towel on the inside, which cannot be done with other nursing bottles. In fact, the bottle

is a tube or cell with a large mouth, designed for the advantages here indicated. The nipple, of course, has to be shaped differently from ordinary types, to adapt it to the unusually shaped bottle. But the wide bottom of the nipple is referred to as involving a distinct advantage. The elasticity of the head allows a larger part of the contents of the bottle to be withdrawn before

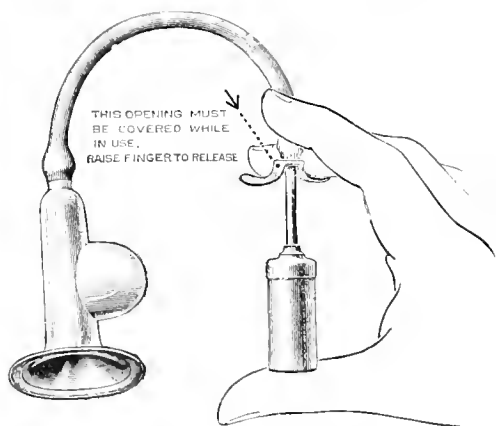


"SWEET BABEE" NURSING BOTTLE.

a vacuum is created than is possible where small necked bottles are used; hence the nipples are not liable to collapse on account of the vibration of the flexible wide bottom of the nipple. This bottle is patented. [Yankee Muffler Co., Utica, New York.]

"YALE" VACUUM BREAST PUMP.

A distinctive feature of the article here illustrated is the pump which is used, instead of a rubber bulb, to create the requisite vacuum. The old style pump in many cases has failed to give satisfaction because of the bulb being too small or too



"YALE" BREAST PUMP.

weak to create a vacuum strong enough for the desired purpose. By the use of the "Yale" pump a vacuum can be made as mild or as strong as may be wished. Besides, the vacuum can be maintained for any length of time. [Becton, Dickinson & Co., Rutherford, New Jersey.]

In the Federated Malay States experiments are being made in the cultivation of the sensitive plant (*Mimosa pudica*) in rubber plantations to replace the useless weeds which grow there naturally in profusion at present and entail the expenditure of much labor for weeding. It is thought that the sensitive plant might oust these weeds and be used as a green manure, being plowed into the land periodically.

THE OBITUARY RECORD.

WILLIAM McMURTRY.

WILLIAM McMURTRY, who died on March 20 at Newton, New Jersey, in his eighty-eighth year, was treasurer of the Rubber and Celluloid Harness Trimming Co. (Newark), which position he had held from the organization of the company, December 1, 1877. Mr. McMurtry was the son of John and Elizabeth (Simpson) McMurtry, and was born September 9, 1820, at Basking Ridge, New Jersey. About 1840 he settled at Newton, where he opened a store, but later went to Newark, living there until about 30 years ago, when he again became a resident of Newton, from which place he

long went regularly to business in Newark. His connection with the harness trimming company above mentioned brought him into business contact with the late Andrew Albright, the previous president of the company for 27 years, until the death of the latter, in 1905.

Mr. McMurtry had been a familiar figure in the community in which he lived from the earliest recollection of most persons there, and the estimate in which he was held was



WILLIAM McMURTRY.

summed up by a neighbor, "All that was good, honest, and true was embodied in his life. We never heard him speak ill of any one, nor did any one ever speak ill of him." He was remarkably vigorous for one of his years until within a few weeks of the end, and retained his interest in business to the last.

During his first residence in Newton, Mr. McMurtry married Catherine, daughter of David Ryerson, who lived until two years ago. They are survived by three daughters—Mrs. David Rutter, of Pine Iron Works, Pennsylvania; Mrs. Henry H. Welles, Jr., Wilkes-Barre, Pennsylvania, and Miss Frances McMurtry, of Newton. Funeral services were conducted by the Rev. C. W. Rouse and the Rev. Dr. Samuel Carlile, on April 1, and the interment was in the family plot in Newton cemetery. The portrait herewith appears through the courtesy of the *Sussex Register*, of Newton, N. J.

GEORGE O. CURRIER, JR.

GEORGE O. CURRIER, JR., of the firm of George O. Currier & Sons, Boston, died at St. Margaret's Hospital in that city on the afternoon of March 30. He had been ill for some three weeks with appendicitis, and after an operation, although he made a brave fight for life and everything was done that skill could suggest, he had not the strength to rally.

Mr. Currier was born in Jamaica Plain, Massachusetts, in 1870; was educated in the Boston public schools and some years ago went into business with his father in note and investment brokerage. Mr. Currier, Jr., made a specialty of rubber stocks and investments and was very well known in the rubber trade, particularly in New England. He was for several years treasurer of the Jamaica Plain Club. He also belonged to the New England Rubber Club and had served on important committees. Personally Mr. Currier was very popular. He was friendly in a quiet, gentlemanly way, was a golf, tennis and billiard player of more than usual ability, and had a very large circle of friends.

The funeral services were held on the afternoon of April 2 at his father's residence in Jamaica Plain, the rector of the Epis-

copal church in that town officiating. The New England Rubber Club and other associations to which he belonged sent beautiful floral offerings and were represented by prominent members.

The following resolutions of sympathy were engrossed and sent to the bereaved family:

NEW ENGLAND RUBBER CLUB.

At a special meeting of the New England Rubber Club, held on Tuesday, March 31, 1908, the following resolutions were passed:

WHEREAS, The sad news of the death of our friend and fellow member, GEORGE O. CURRIER, JR., has come as a great shock to the members of the New England Rubber Club, intimately connected with our trade during his entire business career, his commercial abilities, his genial personality and good fellowship will cause his loss to be most keenly felt by all who have had the privilege of personal or business associations with him.

Resolved, That this club extend to his family its sincere and most heartfelt sympathy.

Resolved, That these resolutions be spread upon the records of the club, and copies engrossed and sent to his family and his business associates.

GEORGE P. WHITMORE,
ELSTON J. WADSWORTH,
ALEXANDER M. PAUL,

Committee on Resolutions.

DEATH OF MRS. HODGMAN.

THE news will be heard with wide-spread regret of the death of Mrs. A. Lorise Hodgman, widow of the late George F. Hodgman, which occurred on April 13 at Larchmont, New York. She was a daughter of Stephen and Elizabeth B. Barker, and was in her sixty-fifth year. She was married to Mr. Hodgman in 1896 and they are survived by two sons, George B. and S. Theodore Hodgman, who are respectively vice president and secretary of the Hodgman Rubber Co. (New York). Funeral services were held on the afternoon of April 15 at the residence of Mr. George B. Hodgman, in West Seventy-fifth street, New York.

DEATHS IN THE TRADE IN ENGLAND.

WILLIAM ORMISTON CALLENDER, who died at his residence in Bournemouth, England, on March 14, in his eighty-first year, was the founder of the business of Callender & Sons, which in 1882 was transferred to a company formed under the name Callender's Bitumen Telegraph and Waterproof Co., Limited, with £100,000 capital. This was succeeded, in turn, in 1896 by the existing Callender's Cable and Construction Co., Limited, of London, with £500,000 share and £300,000 debenture capital. The basis of all these businesses was an insulating material in which Trinidad bitumen formed the chief ingredient, and which material became widely known in Europe as a dielectric for underground mains, under the name "vulcanized bitumen." Mr. Callender was largely instrumental in the introduction of asphalt from the lakes of Trinidad, not only into London but into continental Europe, for paving and other purposes. He ceased to take an active part in the working management of his company's affairs in 1893, but served as an active member of the board until 1903 and thereafter as a "special" director. It may be remembered that Mr. Callender organized an American company about 1884, but it had only a short lived career.

PHILIP FRANKENSTEIN, founder of the well known waterproofing firm of P. Frankenstein & Sons, Limited, of Manchester, England, died on March 12 in his seventy-fifth year. Mr. Frankenstein became a resident of Manchester in 1854, commencing business in connection with the waterproofing trade in that year, but it was not until several years later that the "Victoria" proofing works, now operated by the Frankenstein firm at Newton Heath, Manchester, were founded.

FIVE thousand trees planted by the General Ceylon Rubber and Tea Co., Limited, yielded during the last business year an average of 2½ pounds of rubber.

MR. L. A. OSTIEN, who has been mentioned in these pages as one of the five directors of the Rubber Planters' Association of Mexico, is plantation manager of the St. Paul Tropical Development Co., with offices at St. Paul, Minnesota, and a plantation on the Isthmus of Tehuantepec, in the state of Oaxaca, Mexico. For a number of years before going to Mexico Mr. Ostien was in the faculty of the Agricultural College of Utah.

TO HEINRICH TRAUN, GREETING.

ON Friday, May 8, occurs the seventieth birthday of Dr. Heinrich Traun, of Hamburg, a name distinguished in the annals of the rubber industry, and associated in many ways with the cause of progress in the land of his birth and the benefit of his fellow men. Heinrich Traun, born in Hamburg in 1838, the son of Friedrich Traun, attended the college of Dr. Wichard Lange, after which he was prepared for the university by private tutors. He studied the physical sciences at Gottingen and was graduated at the age of only 21 as a doctor in philosophy, choosing "Kautschuk" as the subject of his thesis. Going to London, he was a chemist in the royal dock yards, and had an opportunity to come into contact with laboring men at their work. Later he was employed in Paris, after which, in 1863, he became a partner in the Harburger Gummi-Kamm Compagnie, already an important concern, but destined to be developed greatly under his direction.



HEINRICH TRAUN, PH. D.

[In the robes of a senator of the free city of Hamburg.]

There had come to America a son of Heinrich C. Meyer, the whalebone manufacturer of Hamburg, to establish a branch in New York, in connection with Conrad Poppenhusen. First to recognize the merit of hard rubber, as developed under Nelson Goodyear's patent, where these same young men, who some time were associated as Meyer & Poppenhusen. It was the same interest, practically, that inaugurated the hard rubber industry at College Point (New York) and Hamburg. In 1856 the German share in the business was organized into the Harburger Gummi-Kamm Compagnie, with works at Harburg, opposite Hamburg. In 1835 Friedrich Traun, a son in law of the elder Meyer, had been admitted to a partnership in the latter's business, and in time three of his sons was also admitted, including the subject of this sketch. Ultimately the rubber and other manufacturing interests of the Meyer and Traun family were separated, Dr. Heinrich Traun taking the rubber branch, and becoming sole proprietor.

In August, 1902, Dr. Traun admitted to partnership his two sons, Heinrich Otto Traun and Dr. Friedrich Adolph Traun, the firm name becoming changed to Dr. Heinrich Traun und Söhne, which style is still retained. In the early part of 1901, he was elected to the position of senator of the free city of Hamburg, the highest and most honorable office in its government. His election gave great satisfaction to the people, to whose interests he has since devoted his time and talents almost solely until recently, when he retired from office on account of advancing years. Dr. Traun since January 1 last has ceased to be an active partner in the rubber firm bearing his name, but is still interested as a special partner.

In no part of his multifarious life work has Dr. Traun been more deeply interested than in the measures for the benefit of the army of employes at his rubber works, in which respect he has not only won the appreciation of those for whose welfare he planned, but has set a model for other establishments which has been widely copied.

NEW ENGLAND RUBBER CLUB—NINTH ANNUAL.

THE yearly election of officers of the New England Rubber Club occurred during the month, at a meeting of the members held in response to the following call:

"An adjourned meeting of the regular annual meeting will be held at the American House, Hanover street, Boston, on Monday, April 27, at 7 P. M., for the purpose of hearing the report of the secretary and treasurer, for the election of officers for the ensuing year, and for such other business as may properly come before the meeting. The meeting will be entirely devoted to business, and there will be no entertainment or collation provided.

"ROBERT L. RICE, Secretary.

"WALTER M. FARWELL, Assistant Secretary."

The reports of the officers were read and received as follows:

THE SECRETARY'S REPORT.

Another year having passed, the Club finds itself entering on its ninth year in fine shape both as to membership and finances. The membership now numbers 242, there having been 22 new members added during the year.

The past year the Club has held two entertainments—the summer outing, held at The Country Club, Brookline, July 17, 1907, and the annual midwinter dinner, held at the Algonquin Club, Commonwealth avenue, Boston, on March 11, 1908. Both were well attended and, from all appearances, exceptionally well enjoyed.

Our Club still retains its membership in the Massachusetts State Board of Trade, and Arthur W. Stedman has been again unanimously selected to serve our Club as delegate to this organization for a term of three years.

Three of our members have passed to the Great Beyond during this year—Edgar S. Hyatt, Horace E. Tyler, and George O. Currier, Jr. Their absence from our meetings will be a great loss and their memories long cherished.

The outlook for the Club for the coming year seems bright, with an ever increasing membership and a stronger feeling of good fellowship, which cannot help but be a great factor to the whole rubber business, as well as adding very pleasant social memories to all our members. Respectfully submitted,

ROBERT L. RICE, Secretary.

TREASURER'S REPORT.

RECEIPTS.

Bank balance, April 15, 1907.....		\$828.50
For initiations	\$80.00	
Annual dues	1,041.25	
Assessments	989.02	2,110.27
Total		\$2,938.77

DISBURSEMENTS.

Dinners	\$1,913.46	
Sundries as per vouchers.....	150.32	\$2,063.78
Bank balance and cash on hand.....		874.99
Total		\$2,938.77

FREDERICK H. JONES, Treasurer.

The official list, with one exception the same as last year, is as follows: Arthur W. Stedman, president; Henry C. Pearson, vice-president; Frederick H. Jones, treasurer; Robert L. Rice, secretary; George Mayo, assistant secretary. Mr. Walter M. Farrell, who was assistant secretary last year, declined reelection on the score of the pressure of other business, and is succeeded by Mr. Mayo, of the firm of William F. Mayo & Co.

The following were elected directors of the Club: Costello C. Converse, Joseph Davol, Elisha S. Williams, Ira F. Burnham, George P. Whitmore, and E. E. Wadbrook.

The honorary vice presidents of the Club are the Hon. L. D. Apsley, the Hon. A. O. Bourn, Robert D. Evans, James Bennett Forsyth, George H. Hood, Henry C. Morse, John H. Flint, and Alexander M. Paul.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE greatest activity in rubber manufacture in Akron at present is in the automobile tire line. In this connection E. C. Tibbits, publicity manager of the B. F. Goodrich Co., said to THE INDIA RUBBER WORLD representative:

"Our tire business is better than it was in April of last year and not nearly so bad as anticipated. In the manufacture of automobile tires we are working up to the fullest capacity night and day. The orders which we have received from branch houses are encouraging to us, for the reason that they show an unusually large demand from individual car owners. Manufacturers are coming in with small orders and many orders that were held up last fall are now going out. In other lines there is a gradual and steady improvement.

"In addition to this the tire makers have met a condition they had not foreseen. Last year the greater demand was for tires to equip large, high-priced automobiles. This year there has been a decided falling off in the sales of the expensive cars compared with the increase in the demand for the car selling for less than \$1500. It was largely for this reason that orders were received for sizes of tires in which manufacturers were not stocked up. In other lines of rubber manufacture the orders aggregate to a good volume, but they are in small quantities. Consumers are timid about stocking up heavily and are buying in a hand-to-mouth fashion."

The number of men returning to employment in the rubber factories here is becoming larger each month. Employment bureaus are busy looking up old employees and returning them to their positions. The addition of night shifts in the tire departments is helping much in this respect. Elmer C. Shaw, superintendent of the Goodrich factory, said that on April 1 there was a grand total of 3600 men employed in the Goodrich factory—an increase of 100 over the number employed on March 1.

Your correspondent was advised by James A. Braden, at the office of the Diamond Rubber Co.:

"The Diamond, the Goodrich and other tire manufacturing companies here are hard put to it to fill the demand for automobile tires. Last fall the automobile manufacturers were at a loss to know how many cars to build for this season. In most cases they decided to restrict their output and consequently orders placed for tires were on the average a third less than the orders usually placed in the fall. These were not sufficient to fill the demand and this spring when the rush of orders came for tires the factories have been enabled to run to the limit again to supply the manufacturers of automobiles."

The Marsh rim factory, which was purchased by the Diamond Rubber Co. last summer, will be moved from Columbus to Akron during the coming summer. It was intended to make the change of location soon after the factory changed hands, but the time has not yet arrived when the company could afford to suspend the manufacture of the rim for the two months necessary to move the machinery.

The B. F. Goodrich Co. will be well prepared to take care of their patrons in Europe during the coming season, as well as to meet the competition of foreign makers through their newly established tire depot in Paris and the fully equipped branch house in London. Goodrich officials say that a larger number of American cars will tour in Europe this summer than ever before.

An injunction suit was filed in the United States district court in Cleveland April 15 by the Swinehart Clincher Tire and Rubber Co. against the Motz Clincher Tire and Rubber Co., both firms having their factories and offices located in Akron. The suit alleges infringement by the Motz company of patent No. 826,622 and asks for damages. The patent is on a tire with side indentations designed to afford greater resiliency. It was secured by J. A. Swinehart. The Motz company is enjoined from manufacturing and selling tires with this feature.

William A. Johnston, president and manager of the Rubber Products Co., of Barberton, has changed his residence from Akron to Barberton, that he may be more closely in touch with his factory. The company was reorganized a year ago from the Alden Rubber Co. and the Pure Gum Specialty Co. The gross amount of business done by the consolidated company during the year past, according to the statement of an official, was \$300,000. Druggists' specialties are the principal products.

Charles S. Eddy, who recently left The B. F. Goodrich Co. after having been actively identified with it for 27 years, recently returned from a visit to the plantation of the Ohio Rubber Culture Co., of Canton, Ohio, with which company he will be actively identified hereafter. The president of the company is Dr. L. E. Sisler, treasurer of the Firestone Tire and Rubber Co., and the secretary is G. S. Pike, of Canton. The capital stock is \$250,000, distributed among stockholders all over the state.

The plant of the Hollinger Rubber Co., of Barberton, has been purchased by George N. Eby, of that city. The new owner announces that he will at once reopen the plant for the manufacture of rubber specialties. The plant has been closed for two years.

The Diamond Rubber Co. had a force of 10 men at the Briarcliff race course in Westchester county, New York. They were in charge of H. G. Smith, of the Cleveland branch of the company.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A REGULAR CORRESPONDENT.

THE fleet of war vessels from the Atlantic having arrived in California waters, the resulting excitement has reached throughout the entire coast territory, and San Francisco is preparing for a grand reception to the fleet early in May. Business men calculate that at least \$1,500,000 of new money will be circulated in this city as a result of the coming of the ships; indeed, one rubber merchant, figuring carefully but more optimistically, insists that \$2,500,000 will be nearer the amount. So much new money doubtless will have the effect of relieving the strain of financial conditions, and the money already here will become more available and times will improve.

There is some complaint owing to the fact that there has been practically no rain for a long time. "But," said Mr. Ralph of the new and growing Phoenix Rubber Co., "ever since I have been here there has been the same cry that the state would be a great sufferer from lack of rain, on years when there was a shortage of rain, and yet I have never seen the harm, and the state has always gone ahead, each year better than the preceding. Even in the early days when grain growing was the chief occupation of the farmers, I never saw a dry year do much harm to the state at large. Now grain growing is a secondary matter. We have our orchards and stock raising and artificial irrigation."

The Plant Rubber and Supply Co. have taken the large three stories and basement building, 45 x 137½ feet, at Nos. 24-34 Beale street, and are moving the stock from the scattered locations about town which the firm has been obliged to put up with since the fire of 1906. They will carry a full line of mechanical rubber supplies and accessories. This firm is preparing for a very good trade during the coming year.

Another change has been made in the comparatively new firm of Barton-Squires-Byrne, Inc. A short time ago Mr. Squires retired and started in with some rubber lines on his own account. More recently the remaining interest of Mr. Byrne has been purchased by Mr. Barton, who now composes the whole firm of Barton-Squires-Byrne, Inc. It is reported that Mr. Byrne is going in with Mr. Squires, and so Mr. Barton is figuring on having the firm name changed.

A. R. Ellert, traveling representative for the Stirling Rubber Co., of this city, has returned from a trip to the Hawaiian Islands, where he found trade conditions very good, especially in

the sundry lines. In conversation with a leading banker in Honolulu he learned that during the worst of the money scare, the banks of the islands were prepared with scrip in case of necessity, but that conditions remained so active there that the scrip was never used.

In Honolulu the Hollister Drug Co., handling the "Kantleek" rubber goods, is doing a flourishing business. Benson Smith is handling the "Qualitair" line. This firm carries a heavy stock and supplies all of the plantation stores. The Honolulu Drug Co. are moving into modern and convenient new quarters and the firm has spared neither pains nor money in providing the new store with attractive fixtures.

Mr. C. A. Tracy, traveling for the Sterling Rubber Co., has returned from a trip through Nevada and Utah, and reports that on account of the mining activity at present in Nevada business is very active.

The Goodyear Rubber Co. have already adopted the plan of closing on Saturday afternoons, and it is surprising that more of the firms do not follow the same plan, instead of dragging along with about half the force gone home and the other half listlessly waiting for 5 o'clock.

The Pacific Coast Rubber Co. are making a fine display of a full line of new stock in their windows at its Mission street store. Mr. Norton, of the firm, reports a very satisfactory business.

The Phoenix Rubber Co. are looking for a permanent location. Their intention is to secure an establishment so large that they can have the entire store and shop on one floor.

The Central American Rubber Co. is the name of a new incorporation that has been formed in Spokane, Washington.

A recent fire did great damage to the store of the Pacific Coast Rubber Co., of Portland, Oregon. The fire occurred March 18.

Moore & Sheehan are now permanently established at their old location, at No. 576 Mission street, in the Braun building, between First and Second streets. They are Pacific coast sales agents of the Davol Rubber Co. (Providence, Rhode Island); the Vulcanizer Rubber Co. (New York); and the Canton Rubber Co. (Canton, Ohio).

NEW TRADE PUBLICATIONS.

HAZARD MANUFACTURING Co. (Wilkes-Barre, Pennsylvania), in issuing a new catalogue of their products, have divided it into two separate publications—Wire Rope and Insulated Wires and Cables. The latter covers electrical conductors for street railway, electric light and power circuits, telephone, telegraph and signal systems. In addition to rubber covered wires and cables, the company manufacture a line of waterproof insulations, all bearing registered trade mark names. The catalogue, which is handsomely got up, is embellished with views of a number of important buildings, mining installations, warships, telephone exchanges, and so on, equipped with their wire products. [6 $\frac{1}{4}$ " x 9 $\frac{1}{4}$ ". 156 pages.]

THE JEFFREY MANUFACTURING Co. (Columbus, Ohio) issue a new catalogue of Rubber Belt Conveying Machinery, with some scores of illustrations of examples of such machinery in operation, in such varying lines of work as the conveying of mails in the Chicago postoffice and handling ore on a very large scale at a South African mine. The rubber belting used, made under patents owned by the company, is specially designed for a wide number of uses. [6" x 9". 48 pages.]

THE MILFORD RUBBER WORKS (Milford, Illinois) issue a Catalogue of their mechanical goods, tires, and molded specialties, in which latter class heels and horseshoe pads figure prominently. [4 $\frac{1}{2}$ " x 8 $\frac{1}{4}$ ". 28 pages.]

W. D. ALLEN MANUFACTURING Co. (Chicago) devote their Circular No. 157 to Lawn Sprinklers and Accessories, of which they are very large manufacturers. They offer an extensive line,

covering a number of special devices on which they hold patents. [3 $\frac{3}{8}$ " x 5 $\frac{7}{8}$ ". 32 pages.]

E. J. WILLIS Co. (No. 8 Park place, New York) issue a new catalogue of Automobile Supplies, of which about 500 are enumerated. Very many tire items are included—indeed nearly half of them all have to do with rubber goods in some form, including automobile coats, horn bulbs, rubber shirts, tire repairing vulcanizers, and so on. This is only a price list, and none of the articles is described at length. [9" x 6 $\frac{3}{4}$ ". 45 + 11 pages.]

BROOKS BROTHERS, a long established New York tailoring firm, have brought out a "Motor Section" of their catalogue—one of the many indications of the extent to which motoring requirements must now be considered by purveyors of clothing, whether for men or for women. Not a few of the items in this catalogue are mackintosh or rubber surface goods. The cover of the Brooks catalogue is ingeniously got up to represent in appearance the motor car number tag required in New York. [6" x 6". 36 pages.]

WASHINGTON RUBBER CO., INC. (Tacoma, Washington) issue a catalogue of Bicycles, Tires, and Bicycle Sundries, of which they are wholesalers on a large scale, their trade through a chain of branch houses extending over a considerable portion of the Pacific coast. The leading makes of these various lines are represented in the catalogue, the size and scope of which would indicate that bicycling must continue very popular in the far West. [7 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ ". 95 pages.]

THE GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio) are sending out an illustrated booklet, "The Care of an Auto Tire," which is full of matter which seems to be of really practical character, and applicable to other tires as well as the Goodyear product. [3 $\frac{1}{2}$ " x 6". 32 pages.]

THE OHIO RUBBER CO. (Cincinnati, Ohio), an important jobbing house, issue an exceedingly full catalogue of Druggists' Sundries and Miscellaneous Rubber Goods, including almost everything in this line which is called for in the household, the whole being profusely illustrated. [9" x 6". 74 pages.]

SOME WANTS OF THE TRADE.

[444] **A**N American manufacturer of artificial limbs would like the address of some rubber manufacturer who is equipped with molds and can furnish sponge rubber parts for artificial feet.

[445] Information is wanted as to how to successfully mend water bottles or any rubber instrument to vulcanize a patch on a water bottle.

[446] "Do you know of any substitute for hard rubber which the acids of ink will not effect?"

[447] "Can you give us the name of any manufacturer of machines suitable for testing tensile strength in a rubber factory? We are desirous of purchasing such a machine."

[448] "Can you give us the address of the party who makes Vorite, very similar to substitute?"

[449] "Kindly give us the names and addresses of manufacturers of solid woven cotton belt."

[450] A German manufacturer writes to ask THE INDIA RUBBER WORLD if a rubber heel of a certain design was in use anywhere prior to a certain date, and the information has been supplied.

[451] An American house in receipt of an order from a Singapore, writes to learn the financial standing of the firm standing it, and information has been supplied.

[452] "Kindly let us have the name and address of a firm in America that makes varnish as used on rubber boots."

[453] "Who makes the Mineralite rubber ball?"

[454] "Will you be so kind as to give us the name of firms from whom we can secure rubber balls, both solid and inflated?"

News of the American Rubber Trade.

UNITED STATES RUBBER CO.'S AFFAIRS.

THE net earnings of the United States Rubber Co. for the fiscal year ended March 31, 1908 (March partially estimated), after payment of interest charges, are stated to have been approximately \$3,508,000, which included dividends amounting to \$800,733 received upon stock of the Rubber Goods Manufacturing Co. in this company's treasury. The net earnings one year ago were then stated in like manner to have been \$4,405,873.84, including Rubber Goods dividends to the extent of \$684,308.32.

The board of directors of the United States Rubber Co. on April 2 declared the regular quarterly dividend of 2 per cent. upon the first preferred stock, and the regular quarterly dividend of 1½ per cent. upon the second preferred stock, for the quarter beginning January 1, from the net earnings of the fiscal year, payable April 30 to stockholders of record April 15. This represents a disbursement for the quarter of \$872,089.

The annual meeting of the shareholders for the election of directors and the transaction of any other business which may properly be brought before the meeting will be held at the registered office of the company in New Brunswick, New Jersey, on May 19, at 12 o'clock M.

MERCHANTS' ASSOCIATION OF NEW YORK.

THE Merchants' Association of New York, while still opposed to a general parcels post, in the belief that it would prove injurious to the country merchant, is supporting a bill (No. 5122) pending in the United States senate for the establishment of a strictly local parcels post system on rural delivery routes, for packages originating on a rural route or at the distributing post-office for delivery by rural carriers to patrons thereof. There are 38,266 rural delivery routes in the United States, over each of which a mail wagon passes daily, but the carriers are prohibited from carrying anything except mail matter as now prescribed by law. The new bill has for its object the permitting of carriers to assist in the exchange of small packages between farms and the nearest postoffices, under conditions which would yield a revenue to the government.

HOFELLER PLANS LARGER PREMISES.

THEODORE HOFELLER & Co., the extensive waste rubber merchants of Buffalo, New York, have arranged for securing larger premises, through the lease, for a long term of years, from the Corn Products Co., of a factory in that city occupied formerly by the American Glucose Co. in the manufacture of glucose. The property embraces a five story brick building 80 x 108 feet and an adjoining three story building 32 x 168 feet, the whole affording about 70,000 square feet of floor area. Plans are under preparation for modernizing the buildings by putting in electric freight elevators and other electric equipment, baling presses, and so on, and adapting floor levels to the height of car floors, as shipping is to be done by the New York Central railroad, a switch from which is convenient to the premises described. In their new quarters Messrs. Hofeller & Co. will have facilities for the waste rubber and allied trades not second to any other in America or Europe.

ANNUAL ELECTION OF THE GUTTA PERCHA COMPANY.

At the annual meeting of shareholders of the Gutta Percha and Rubber Manufacturing Co., in New York, on April 1, the following directors were unanimously elected: Henry Spadone, Walter W. Spadone, Mathew Hawe, and Alfred A. Spadone. At a subsequent meeting of the board of directors the following officers were elected: Henry Spadone, president; Walter W. Spadone, vice president; Mathew Hawe, treasurer, and Alfred A. Spadone, secretary. The three Messrs. Spadone men-

tioned are sons of the late Amodee Spadone, so long president of the company, and whose obituary appeared in THE INDIA RUBBER WORLD March 1, 1908 (page 101). Mr. Hawe has been identified with the company since about 1875, and has filled the office of treasurer for a number of years.

RUBBER GOODS FOR THE INDIANS.

THE specifications for supplies for the Indians, at the government expense, for the fiscal year beginning July 1, 1908, for which proposals will be opened at Washington on May 5, include specifications for the usual details in the way of rubber footwear, as follows:

720 pairs men's rubber boots, Nos. 7-11;
 720 pairs boys' rubber boots, Nos. 1-6;
 772 pairs moccasins, articles, Nos. 1-2;
 1000 pairs women's articles, Nos. 1-2;
 872 pairs men's articles, Nos. 7-11;
 720 pairs boys' rubber moccasins, articles, Nos. 1-6;
 640 pairs moccasins, "featheredge" variety, Nos. 1-2;
 1580 pairs women's rubber moccasins, Nos. 1-2;
 700 pairs men's "featheredge" variety, Nos. 7-11.

At the same time proposals will be opened for rubber goods of the following amounts and descriptions:

600 feet rubber belting, 4 to 10 inches wide;
 1500 pounds rubber packing;
 1120 pounds packing, "Rainbow" style;
 8100 feet rubber garden hose;
 5800 feet cotton rubber lined fire hose;
 136 hose couplings;
 37½ dozen hose clamps;
 16 hose strap fasteners;
 120 hose nozzles.

A NEW PENCIL FACTORY IN PROSPECT.

THE important pencil manufacturing house of Johann Faber, of Nuremberg, Germany, after having maintained an American agency for a number of years, will begin soon the operation of a branch factory in this country, which has been in course of erection since July of last year, at Irvington, a part of Newark, N. J. Already there are two large Faber pencil concerns in the United States, both tracing their origin to the long established Nuremberg industry, and their business has added to an important extent to the demand for erasers and other rubber stationers' sundries of American make. The new enterprise may be expected to have a similar effect.

TRADE NEWS NOTES.

THE Gilbert-Besaw Co. (Cleveland, Ohio), comprising Cassius M. Gilbert and Charles A. Besaw, own a reclaiming process said not to involve alkalis, acid, or oil, which is controlled and operated in this country and Canada (with the exception of a reservation in favor of the Firestone Tire and Rubber Co.), by the New Jersey Rubber Co., of Lambertville, New Jersey. Special machinery is used in the application of this process, the product of which is claimed to be especially adapted for the manufacture of tires mechanical goods, and for insulation.

THE La Crosse Rubber Mills Co. (La Crosse, Wisconsin) are making a full line of rubber boots and shoes, including tennis shoes, on which they are putting their special "honeycomb" sole. They also specialize on lumbermen's red soled shoes. In addition to footwear the company makes a line of mackintoshes and rain coats. They recently supplied every member of the La Crosse police force with a pair of rubber boots for the purpose of testing their wear-resisting qualities, the result of which was wholly satisfactory.

THE X-Tire Rubber Sponge Co. (Chicago), manufacturers of the well known "Featheredge" sponge, have commenced the manufacture of red rubber, which they intend making extensively. They are now also putting out a line of sponges adapted for railroad use and vehicle cleaning and other such like purposes.

DAVIDSON RUBBER CO.—MORE NEW EQUIPMENT.

THE new heater room at the Davidson Rubber Co., now in commission, is exceedingly complete. The vulcanizers, of which there are five, are set horizontally about two feet below the floor level of the room, are covered in with asbestos to prevent radiation and equipped with recording gages, and so piped that when they are blown off the steam is carried above the building. In front of the heaters are tracks and switches which take the cars from the various departments. The mold room, which is just back of the heater room, is also connected by track, but before a heat of molds on the way from the vulcanizer reach the mold rooms, they pass through a very ingenious spraying pan which cools them so they can be easily handled. The room is lighted from the sides and a monitor top roof and for night work by electricity.

RUBBER GOODS FOR THE GOVERNMENT.

THE requirements of rubber goods for the bureau of engraving and printing, at Washington, for the fiscal year beginning July 1, 1908, include—

- 1,000 yards rubber cloth for plate printing, 45 inches wide.
- 600 yards rubber cloth, 30 inches wide.
- 24 printers' blankets, 18 x 26 inches.
- 210 pairs rubber boots.
- 120 gross rubber finger tips.

The United States postoffice department has advertised for proposals, to be sent to Washington by April 15, for supplies for the fiscal year beginning July 1, including rubber items of a greater amount than in any former year. The specifications call for—

- 11,000 pounds rubber bands.
- 2,000 bevel erasers.
- 1,925 dozen typewriter erasers.
- 148,040 rubber stamps, in great variety.
- 875 items of rubber stamp repairs.
- 2,525 sets rubber type; also,
- 14,750 pieces rubber type.
- 7,020 dozen pads for rubber stamps.
- 1,300 rubber stamping pads.
- 10 gross finger cots.

The specifications last year called for 104,801 rubber stamps. This year's specifications do not mention "flexible stamps of printers' roller composition," of which a considerable number were taken at one time.

RUBBER GOODS FOR THE NEW YORK INSANE.

Bids were opened on March 10 for furnishing supplies to the 13 New York state hospitals for the insane, for a period of six months from October 1, 1908, including the following items of rubber goods:

- 240 men's black rubber coats.
- 184 dozen men's rubber boots.
- 35½ dozen women's rubber boots.
- 161 dozen men's storm rubbers.
- 338 dozen women's storm rubbers.
- 55 dozen men's felt boots, with pure gum overs.
- 5 dozen extra overs.

GLENDALE ELASTIC FABRICS CO. ANNUAL.

At the annual meeting of shareholders of the Glendale Elastic Fabrics Co. (Easthampton, Massachusetts, March 27) the following directors were elected: W. G. Bassett, Harry E. Converse, Lucius Tuttle, Edmund K. Turner, George Astill, and Edward P. Dickerman. William G. Bassett was re-elected president, George Astill general manager, and Clifford A. Richmond clerk and assistant treasurer. The affairs of the company were reported to be in a very prosperous condition, and the usual dividend was declared.

AMERICAN MADE TAXIMETERS.

FIRST of the American taximeters to be made and put in use is the one made by the Westchester Appliance Co. (Yonkers, N. Y.) and marketed through the Ajax-Grieb Rubber Co. (New York). The taximeter is made under United States patent No. 760,125, owned by the Taximeter and Cab Co. of America, and the first order was for 2,600, since which time, it is stated, other orders have been placed. This taximeter shows the number of trips; the total cash for the day; the total number of miles covered and each individual fare. Moreover, by a unique device it

is arranged that when there is any discussion regarding fare after the occupant leaves the cab, there is no chance of the driver allowing the fare to be running up. This is accomplished by a further lowering of the flag. The selling rights are owned by the Ajax-Grieb Rubber Co., who make a combination offer of tires and taximeters to the trade. Horace De Lisser is president of both the rubber company and the Westchester Appliance Co.

THE MERCHANTS' ASSOCIATION OF NEW YORK.

At the election of officers for the current year on March 5, Mr. Henry R. Towne, president of the Yale & Towne Manufacturing Co., was chosen president, succeeding Mr. Clarence Whitman, who declined reelection. The executive committee have approved a bill introduced at Washington by Senator Beveridge (Senate bill No. 3163), providing for the creation of a permanent nonpartisan tariff commission. The association has also been committed to the proposal that a special training school be founded by the United States government for preparing appointees to the diplomatic and consular services.

TRADE NEWS NOTES.

OWING to the difficulty experienced by the Banigan Rubber Co. in getting help in Providence in the past, arrangements have been made to manufacture their product in Woonsocket as soon as the necessary preparations can be made.

The stock of the Pacific Coast Rubber Co., at Portland, Oregon, burned on March 18, was insured for \$64,000.

Mr. Clifford H. Oakley, general superintendent of the Combination Rubber Manufacturing Co., at Bloomfield, New Jersey, and formerly general manager of the Grieb Rubber Co., at Trenton, tendered a dinner to the executive committee and advisory board of the Trenton Manufacturers and Employers' Association on the evening of March 26, in the Chamber of Commerce Building, Trenton. Mr. Oakley has been president of the association during the past year and the dinner was given by him to mark his retirement from the office. Following the banquet the association held its annual meeting and elected officers. Those chosen were: John Woodhouse, of the Woodhouse Chain Works, president; William R. Thropp, manufacturer of rubber machinery, vice-president; Carl F. Adams, of the Adams Electric Co., secretary; Arthur Moon, of the Henry R. Fell Paving Co., treasurer.

Raw Products Co. (New York) favor us with a sheet of statistics of crude rubber for 1907, including a chart of prices of the leading Pará sorts for three years past.

The Woonsocket Rubber Co. are installing at their "Alice" mill, at Woonsocket, a new 20" and 40" x 60" Rice & Sargent horizontal compound condensing engine, designed to develop, at 65 per cent. cut off, 950 hp. at 65 revolutions per minute. The flywheel is 22 feet in diameter and weighs 80,000 pounds. The stripping weight of the engine complete is 247,000 pounds. Charles F. Parker has the contract for building the foundation for the engine, concrete floors, and so on.

One of the most interesting of recent advertising novelties brought out by any firm is the "Wales-Goodyear Arctic Inkwell," distributed to their patrons by the rubber company indicated by its title. It is of glass, in the form of a very useful article of footwear, with an appropriate nicked cover, and it is pointed out that when filled with ink "it looks still more like an arctic."

Edward G. Robertson has been elected treasurer of the Rubber and Celluloid Harness Trimming Co. (Newark, New Jersey), succeeding the late William McMurtry.

The office of president and general manager of the Elkhart Rubber Works (Elkhart, Indiana) is now filled by Mr. R. A. McKinney, identified formerly with Pittsburgh steel interests. W. F. Schacht, who has had several years' practical experience in rubber manufacturing, is superintendent. Mr. George M. Graham, formerly manager, has retired from the company and entered another line of business in Elkhart.

NEW YORK CITY BUYS MORE FIRE HOSE.

A CONTRACT for furnishing 20,000 feet of 3 inch five ply rubber fire hose for use in the borough of Manhattan has been awarded by the fire department of New York city, based upon proposals received therefor at public letting held on April 3. The contract was awarded on that date to the Republic Rubber Co. (Youngstown, Ohio), through their New York branch, the amount of their bid being \$30,800, or \$1.54 per foot. This concludes the purchase of 100,000 feet of rubber fire hose by the city since January 1 of the present year, of which 60,000 feet are to be furnished by the Republic Rubber Co.

The fire commissioner of New York City has advertised for 7000 feet of 3 1/2 inch rubber fire hose for the borough of Manhattan, and 3000 feet of the same kind of hose for the borough of Brooklyn, for which bids will be received until May 6.

The Fire Department is a seller of hose, as well as a buyer. At an auction sale on April 27, among the articles offered were 5500 feet of old rubber hose, 5000 feet of old cotton hose, besides considerable quantities of old tires, old landing pads, old rubber valves, and material described simply as "scrap rubber." None of the hose offered, by the way, was described in the official catalogue as "rotten," in spite of the frequency with which the newspapers have referred to the possession of such hose by the department.

A RUBBER SUBSTITUTE FROM EUROPE.

A SUBSTITUTE that has long been used in England and Germany, where it is said to have stood in connection with rubber the severest tests, for periods ranging from 5 to 7 years, is that manufactured by the National Co. (Chicago). In compounding it is said that the rubber used in connection with it is cheap African ball. The manufacturers claim that it not only adds to the wearing power of the manufactured goods, but that it delays oxidation and decadence almost indefinitely. The company are willing to furnish samples and full information.

TRADE NEWS NOTES.

A NEW firm in the elastic webbing trade is Hutton & Lapworth, at Brockton, Massachusetts. It is composed of Charles A. Lapworth, son of William Lapworth, of Milford, Mass., of the important elastic fabric concern there, and Fred W. Hutton, lately of the Old Colony Rand Co., at the latter place, which concern they will succeed in the premises to be occupied. The company expect to begin about May 15 with 8 looms.

The address of the Aiton Machine Co., builders of machinery for the rubber and other industries, has been changed from New York City to Elizabethport, New Jersey.

The National Metal Back Rubber Tiling Co. (Philadelphia) are about to remove the production of their goods from Trenton to the factory of the Electric Hose and Rubber Co., of Wilmington, Del.

At the annual meeting of the American Rubber Co. at Boston, on April 21, William R. Dupee, Samuel P. Colt, Harry E. Converse, Lester Leland and Costello C. Converse were elected directors. Mr. Dupee was reelected president and George P. Eustis treasurer and clerk.

At the annual meeting of the Boston Rubber Co. in Boston, on April 21, William R. Dupee, Samuel P. Colt, Harry E. Converse, Lester Leland, and S. Lewis Gillette were elected directors. Mr. Dupee was reelected president and George P. Eustis treasurer and clerk.

The United States Rubber Co. were reported lately to be operating between 60 and 65 per cent. of their full capacity—an improvement of 25 per cent. over the extreme low point of the past winter.

W. H. Yule, son of George A. Yule, one of the receivers of the Pope Manufacturing Co., has resigned from the Badger Brass Manufacturing Co. to become manager of the golf ball department of The B. F. Goodrich Co. He has long been devoted to golf affairs.

NEW INCORPORATIONS.

THE Progressive Rubber Co., March 23, 1908, under the laws of Ohio; capital \$25,000. Incorporators: E. Van Kirk, D. O. Van Kirk, M. E. Fisher, L. F. Upton, and J. Edward Van Kirk. About a year ago the Excelsior Hard Rubber Co., at Mineral City, Ohio, went into the hands of a receiver, and the plant was purchased from the receiver last August by E. Van Kirk, who has since operated the plant under the name of The Progressive Rubber Co., which now has become incorporated. They are manufacturing Upton's hard rubber ten pin balls, covered by patents, and it is understood will add other lines shortly.

Detachable Twin Rubber Heel Co., April 1, 1908, under the Massachusetts laws; capital authorized, \$50,000. Incorporators: Charles L. Riley, Eugene H. Walker, and Samuel W. Culver, all of Boston. Mr. Riley is president and Mr. Walker treasurer, with offices at No. 28 School street, Boston.

Van's Auto Tire Co., February 24, 1908, under the laws of New York state; capital, \$2,000. The incorporators include Frank Van Tassel, No. 220 West Forty-eighth street, New York.

Noslip Tire Protector Co., February 21, 1908, under the laws of New York state. Worley A. Shepard, No. 111 Broadway, is one of the incorporators.

New York Auto Tire and Repair Co., March 25, 1908, under the laws of New York state; capital, \$10,000. Directors: Henry Rothschild (No. 208 East Seventy-fifth street), Frank D. Gable, and John S. Wiese, all of New York city.

The Braintree Rubber Cement Co., March 23, 1908, under the laws of Maine, to make and deal in rubber cement and allied goods; capital \$30,000. Edmund H. Talbot, of Sharon, Massachusetts, is president and treasurer.

O'Brien Rubber Thread and Webbing Co., April 1, 1908, under the laws of New Jersey; capital authorized, \$250,000. To make and sell elastic and non-elastic webbing. Incorporators: William J. O'Brien and Richard Barlow, Trenton, N. J.; and Spencer B. Hibbs, Hulmeville, Pennsylvania. Agent and registered office in New Jersey: Anthony T. Williams, No. 147 East State street, Trenton.

National Web Co., April 18, 1908, under the laws of New Jersey; capital \$50,000. To manufacture elastic and non-elastic webbing. Incorporators: Charles H. Weller, Abraham Naar, Sr., and William M. Rysdyk. Registered address: No. 260 Washington street, Jersey City, N. J.

TRADE NEWS NOTES.

THE Milford Rubber Co. (Boston) are reported to have resumed work on full time at their proofing factory at Milford. It is understood that the output of the factory is 10,000 yards per day when running full.

Charles B. Archer, president of the Archer Rubber Co. (Milford, Massachusetts), is reported to be looking for a larger factory.

Robert E. Tyson (Fairfield, Connecticut) has got his rubber substitute factory working regularly and is reported to be making some good shipments.

The Seamless Rubber Co. (New Haven, Connecticut) have filed with the secretary of state a certificate of capital stock from \$300,000 to \$500,000. THE INDIA RUBBER WORLD has repeatedly announced such increases of this company's capital, since back in the early years, when the first increase was from \$50,000.

Arthur Reeve, of the selling department of the United States Rubber Co., left New York recently for a trip to the Far West, including the principal Pacific coast towns, and intended to cover about 8,000 miles.

A. Petersen Co. (Akron, Ohio), extensive manufacturers of paper boxes, are making a specialty of supplying the rubber goods trade, from which they have received liberal support from points as remote as St. Louis and Boston.

BANIGAN WORK GOES TO WOONSOCKET.

THE factory of the Joseph Banigan Rubber Co., at Olneyville, Rhode Island, which was shut down on March 14, will remain closed indefinitely. The management of the United States Rubber Co., who have controlled the Banigan plant since 1900, decided recently to combine its production with that of the Woonsocket Rubber Co., and the employes at Olneyville were notified to report to Superintendent Schlosser, at Woonsocket. The new plan is referred to as a measure of economy that will benefit both the company and the employes, since the concentration of production will reduce the total expense of administration and give steadier work to the employes. The "Alice" mill at Woonsocket is perhaps the finest rubber shoe factory in existence. It was built by the late Mr. Banigan for the daily production of 30,000 pairs, but never has been run to its utmost capacity. It is capable of taking on the shoe work done at Olneyville in addition to its own usual production, while the boot work of the Banigan shop can be taken care of by the Woonsocket boot factory at Millville. Notices have been posted at the two plants of the Woonsocket Rubber Co.: "The first ticket at this mill will be made on May 15." It is estimated that 1500 hands will be employed at the "Alice" mill and 800 at Millville, calling for the weekly disbursement of \$25,000 a week in wages. The Banigan factory will not be dismantled, but held in readiness for the possible future development of the rubber footwear trade.

AMERICAN CIRCULAR LOOM CO. BURNED OUT.

THE greatest fire of the year thus far was that which occurred in the city of Chelsea, near Boston, on April 12, causing a loss commonly estimated at \$10,000,000 or upward. Chelsea is an important manufacturing center, embracing several concerns in rubber and allied interests, not all of which, however, were damaged. The most important loss in this field was sustained by the American Circular Loom Co., whose factory for Circular Loom interior conduits at Chelsea, together with warehouse, stables, and home offices, was completely destroyed, though they were fully covered by insurance. The factory employes suffered severely, as nearly all lived in the vicinity of the factory. These lost their houses and all the contents. Some of them were injured and one, a young woman, was burned to death. The company lost no time in getting started again. They speedily secured a new factory, admirably adapted to their needs, in North Cambridge, Massachusetts, and have established new permanent offices in the International Trust building, in Boston. They are assembling new machinery for the "circular loom" products, and will be able shortly to supply the demand for these regularly and promptly. Only the company's Chelsea plant suffered from the fire. Their Electroduct factory at Kennilworth, New Jersey, is in full operation, and their new Metal Molding factory, also at Kennilworth, has just been completed, including a large electro galvanizing plant. The circular loom product is designed for interior wiring, and consists of a covering which is woven on instead of being laid on or braided in the usual manner. The wire having been covered, the whole is saturated with an insulating compound.

CHELSEA FIRE NOTES.

FOLLOWING the \$10,000,000 fire at Chelsea, Massachusetts, on April 12, the organized shoe trade of Boston and vicinity, including a number of firms who are large handlers of rubber footwear, contributed a good sized relief fund for the benefit of sufferers from the fire.

While the factory of the Boston Blacking Co., manufacturers of rubber cement, was very near the area devastated by the fire at Chelsea, it appears that it was not seriously injured. In fact, only some storehouses were burned, and the main cement plant was unharmed.

The mayor of Malden, Massachusetts, who offered prompt and important relief to the sufferers from the recent Chelsea fire, is Mr. G. Louis Richards, who for many years was identified with

the Boston Rubber Shoe Co. Several team loads of food were also supplied by the chairman of the Malden board of aldermen, Mr. William Neidner, of Charles Neidner's Sons, hose manufacturers.

RUBBER SHOE FACTORIES RESUME WORK.

WORK was resumed at the plant of the National India Rubber Co. (Bristol, Rhode Island) on April 6, after a shutdown of three weeks. There is a large ticket of tennis goods, and some overshoes and gaiters are being made. Some sample boots were made recently, and it is reported that this line may be added to the company's production. During the shutdown some large dynamos were introduced in the plant, pointing to the increased use of electricity there. The new hose room is mentioned as being equipped with machinery to be driven by electric power.

The boot and shoe department of the Goodyear's India Rubber Glove Manufacturing Co. (Nagatuck, Connecticut) and the reclaiming plant of the United States Rubber Co. at the same place resumed work on April 6.

TRADE NEWS NOTES.

THE First Rubber Co., No. 22 Fifth avenue, Chicago, are now selling the output of a local mechanical goods factory, in addition to the heel and hoofpad lines previously carried.

The Raven Mining Co., with offices in the Marquette building, Chicago, are building a new factory at Stickney, Illinois, which will afford materially increased capacity, very much needed for the accommodation of the present volume of business.

The Milford Rubber Works (Milford, Illinois), in addition to automobile and bicycle tires, are entering upon the production of a general line of mechanical rubber goods.

M. Kaufman, a leading Chicago waste rubber merchant, has removed from No. 200 Michigan street to a new building, Nos. 113-119 North Sheldon street, on the "Pan Handle" railway.

The Mellroy Belting and Hose Co. (Chicago), manufacturers of Rubber-It stitched canvas belting hose, have removed to Nos. 8-10 South Canal street. F. B. Mellroy is now president and Lewis Cole secretary and treasurer.

Erie Pump and Engine Co. (Erie, Pennsylvania), referred to last month as having absorbed the Bay State Machine Co., of the same city, advise THE INDIA RUBBER WORLD that they intend to take up the production of rubber factory machinery in the near future.

The firm of A. W. Brunn & Co. (Produce Exchange building, New York) having been dissolved by mutual consent, the business will be continued at the same address by A. W. Brunn, as agent for foreign crude rubber, waste rubber, and substitute houses, and as local broker for the importers of crude rubber.

The *Mexican Herald* recently noted the arrival in Mexico City of a party of officials and shareholders in the Continental-Mexican Rubber Co.—a leading guayule company—including C. A. Hunter and E. J. Coughlan, of New York. These gentlemen are respectively vice president and factory manager of the New York Belting and Packing Co., Limited, and Mr. Hunter is also vice president of The Peerless Rubber Manufacturing Company.



FACTORY OF THE FIRESTONE TIRE AND RUBBER CO. (AKRON, OHIO).

THE SEWARD RUBBER CO. RECEIVERSHIP.

The shareholders of The Seward Rubber Co. (Berlin, Connecticut), as reported already in these columns, brought a suit praying for dissolution and winding up of the corporation. The statutes provide in such case for the appointment of a receiver, and Mr. Lucius C. Ryce, of Hartford, was appointed, with the permission of the court to continue the business for two months, from March 6. The greater part of the manufactured goods and raw material have been disposed of, and the next step will be the sale of the factory plant.

A TIRE IN A MAGAZINE STORY.

Of the many monthly magazines devoted to American fiction *The Argosy* is as well known to a certain class of readers as any. In its pages the first story is always a complete novelette. For example, one that thrills of the most thrilling kind was a "Crack-A-Jack Craftsman," by E. V. Preston. The same author in the May issue writes an equally original novelette entitled "Section 539." The crux of the story, aside from the remarkable adventures of the hero, is his accidental discovery that feathers mixed with a certain kind of dope make a tire puncture proof. The result is that he gets a \$10,000 job with the Alexander Puncture Proof Tire Co. The story points so definitely toward the Dow Puncture Proof Tire Co., with its compound of paste and feathers, and its worthy head, whose forename is "Alexander," that the reader is filled with wonder and admiration. Is it a coincidence, or only good advertising?

TRADE NEWS NOTES.

ONE of the buildings of the Middlesex Last Co. (Malden, Massachusetts) was burned on March 31, causing a loss of about \$20,000. The company do a large business in supplying lasts for rubber shoe factories.

The United States Graphite Co. having been adjudged bankrupt, the first meeting of creditors was held at West Chester, Pennsylvania, on April 13, at which time those attending appointed as trustee William C. Wilson, of No. 1416 South Penn square, Philadelphia. The property of the company is to be sold on May 7.

Hardware, of New York, is a paper that is well known to the mechanical end of the rubber trade, and it will therefore interest manufacturers in that line to know that control of it has been secured by Mr. Harold S. Buttenheim, an exceedingly well equipped and up-to-date young journalist. He is a nephew of Mr. John J. Voorhees, president of the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey).

Professor William H. Bristol, whose inventions the Bristol Co., of Waterbury, Connecticut, has been manufacturing since it was first organized, in 1889, assumed active charge of the management on March 28, and now owns the majority interest. The business which has been carried on under the personal name of William H. Bristol, in New York, has been combined with the Bristol Co., the combination giving the latter the most complete line of recording instruments in the world for pressure, temperature, electricity, and various other applications.

Two products of the Rubbertex Cloth and Paper Co. (Logansport, Indiana) that are meeting with a wide sale are "Rubbertex" and "Lonabond." The first is a textile packing for steam and cold water, and the second a textile "ready roofing." The base of these products is heavy duck, which is saturated with a certain petroleum product, by a process patented by Lon A. Bond. A special feature of these goods is that they are not injured by contact with oils.

A live organization is the Eastern Paint Manufacturers' Association, which has been active lately in opposing some legislation proposed for the control of the sale of linseed oil, white lead, and so on. The chairman of the legislative committee is C. H. Spotts, of the Joseph Dixon Crucible Co., and another member is Maximilian Toch of New York, whose firm are suppliers of chemicals to the rubber trade.

TIRE COMPANY NOTES.

The Auto Tire Co. (Kansas City, Missouri) have removed to Nos. 605-607 Fifteenth, where they are referred to as having one of the most complete repair plants in the West. They have the agency for Morgan & Wright tires. Victor Nelson is the proprietor.

The interest coupons on the debenture bonds of the Consolidated Rubber Tire Co. were payable April 1 at The Trust Co. of America (New York), the rate for the year being 2 per cent.

The Milford Rubber Works (Milford, Illinois), manufacturers of tires and molded goods, announce as their New York branch the Hayes Rubber Co., No. 57 Warren street.

The National Cement and Rubber Manufacturing Co. (Toledo, Ohio) are in the possession of George C. Bryce, receiver in bankruptcy. The appointment of a permanent receiver has been expected to occur about May 1. The business was founded about 11 years ago, and at one time, during the palmy days of bicycling, was accounted very profitable.

Harry G. Smith, of the Cleveland branch of the Diamond Rubber Co., who has charge of the Diamond supply car in the Glidden tour last summer, was captain of the Diamond tire camp on the course at Savannah for the races March 18-19. Twelve of the seventeen cars entered were equipped with Diamond tires, and fifteen with the Diamond dismountable rim.

The Empire Automobile Tire Co. (Trenton, New Jersey) have established a branch at Detroit, Michigan, in charge of W. M. Perrett, who formerly represented The Diamond Rubber Co. in the last named city.

The Continental Caoutchouc Co. (New York), so long established at No. 43 Warren street, have removed "up town," to Nos. 1788-1790 Broadway, at the corner of Fifty-eighth street.

It is gossiped that E. D. Winans, who formerly held the sole agency for the sale of Michelin tires in the United States, netted the very neat sum of \$200,000 in the sale of his company and the American rights to the present American Michelin company.

The Firestone Tire and Rubber Co. (Akron, Ohio) have obtained consent, as a foreign corporation, to transact business in Missouri, and filed a certificate to this effect with the secretary of state.

The Fisk Rubber Co. (Chicopee Falls, Massachusetts) were reported lately to be working practically full time. An improvement in trade was reported, particularly in the west.

The Rutherford Wheel Co., manufacturers of the Rutherford pneumatic wheel, are now located at Stamford, Connecticut. The company as now constituted was incorporated under the laws of Maine in May, 1907. Mr. E. S. Watson is manager of the company.

The Hartford Rubber Works Co. began last month with running overtime, which condition has continued. The company were reported recently to be advertising for additional tire makers.

A new line of tire inner tubes branded "Kantleek" and made by the Seamless Rubber Co. (New Haven, Connecticut) has attracted favorable attention at some recent automobile shows.

The Automobile Club of America having decided not to continue active in the automobile show interest, the show with which it has been identified hitherto will be promoted exclusively this year by the American Motor Car Manufacturers' Association, which announces that the Grand Central Palace in New York has been leased for next winter's show, to be held probably in January next.

The receivers of the Pope Manufacturing Co. report that from August 14, 1907, to March 31, 1908, they received \$880,406.04 and disbursed \$822,052.34, leaving a balance of \$17,791.25.

The Boston Rubber Shoe Co.'s Edgeworth factory resumed operations on April 22 and their Fells factory is due to open two weeks later.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for five weeks, ending April 25:

COMMON STOCK.

Week	March 28	Sales 5,550 shares	High 23 ³ / ₈	Low 21 ¹ / ₈
Week	April 4	Sales 750 shares	High 22 ¹ / ₂	Low 21
Week	April 11	Sales 2,070 shares	High 20 ³ / ₄	Low 18 ¹ / ₂
Week	April 18	Sales 1,045 shares	High 20 ³ / ₄	Low 19 ¹ / ₂
Week	April 25	Sales 3,000 shares	High 21 ¹ / ₄	Low 10 ⁵ / ₈
For the year—High, 26; Jan. 14; Low, 17 ¹ / ₂ ; Feb. 26.				
Last year—High, 32 ¹ / ₂ ; Low, 13 ¹ / ₂ .				

FIRST PREFERRED STOCK.

Week	March 28	Sales 1,700 shares	High 86	Low 84
Week	April 4	Sales 2,000 shares	High 85	Low 81
Week	April 18	Sales 1,310 shares	High 84 ¹ / ₈	Low 82 ¹ / ₂
Week	April 11	Sales 8,000 shares	High 85	Low 80
Week	April 25	Sales 1,081 shares	High 83 ¹ / ₂	Low 81 ¹ / ₄
For the year—High, 88 ¹ / ₂ ; Jan. 9; Low, 76; Feb. 10.				
Last year—High, 100 ¹ / ₂ ; Low, 61 ¹ / ₂ .				

SECOND PREFERRED STOCK.

Week	March 28	Sales ... shares	High ..	Low ..
Week	April 4	Sales 500 shares	High 54	Low 50
Week	April 11	Sales 1,245 shares	High 50	Low 49
Week	April 18	Sales 500 shares	High ..	Low 50
Week	April 25	Sales ... shares	High ..	Low ..
For the year—High, 61 ¹ / ₄ ; Jan. 23; Low, 42; Feb. 21.				
Last year—High, 78 ¹ / ₂ ; Low, 30.				

HOOD RUBBER CO. STATEMENT.

THE Hood Rubber Co. (Boston) have filed with the Massachusetts State authorities, as required by law, a statement of their condition as of February 1, 1908, as compared with one year previous:

ASSETS.		1908.	1907.
Plant		\$614,000	\$600,000
Merchandise and materials		1,599,131	1,544,303
Cash and debts receivable		1,118,183	744,049
Total		\$3,242,115	\$2,888,343
LIABILITIES.			
Capital stock		\$1,210,500	\$1,000,000
Floating debt		880,000	600,000
Surplus		962,115	928,343
Preferred stock not fully paid		180,500	.....
Total		\$3,242,115	\$2,888,343

THE G. & J. TIRE CO. LOSE ON APPEAL.

THE tire patent decision in the case of The Gormully & Jeffery Tire Co. v. The Pennsylvania Rubber Co., rendered at Pittsburgh on September 9, 1907, by Judge Joseph Buffington, in the United States circuit court for the western district of Pennsylvania, failed to sustain the assertion of the plaintiff that the patents upon which the suit was based had been infringed. [See THE INDIA RUBBER WORLD, October 1, 1907—page 23.] This decision was appealed from to the United States circuit court of appeals for the third circuit, in which the decision of the lower court has been affirmed. The opinion was written by Judge James B. Holland, of Philadelphia, and filed in the office of the appellate court clerk in that city early in April.

The original suit was based upon four patents, granted at different times to Thomas B. Jeffery. The burden of the Pennsylvania Rubber Co.'s defense was that of non infringement, though they admitted that their tire was similar to that described in the patent of William Golding, No. 493,160, dated March 7, 1893, which was also the property of The G. & J. Tire Co., but which expired and became public property before the defendants began the production of such tires. The Golding invention was patented both in Great Britain and the United States, the first application having been made in the former country. The United States patent, therefore, under the statute then in force, expired simultaneously with the British patent, instead of running for 17 years, which would have made the date of expiration March 7, 1910.

Judge Holland, in his opinion, quotes at length from the former decision by Judge Buffington, to the effect that the Jeffery patents had not been infringed. The point is made that the

tires produced by The G. & J. Tire Co. differ from the specifications in the chief Jeffery patent, and that the imitation of such tires does not constitute infringement of the patent. Both parties to the suit, however, have used the attaching device described in the Golding patent, already referred to as having become public property, so that such use at a later day by the Pennsylvania Rubber Co. is not infringement.

It is understood that the G. & J. Tire Co. do not accept the latest decision as final, though it has not been decided what will be their next move in the matter. The company hold, it is understood, that Judge Holland's decision rests upon a wrong conception of the scope of the Golding patent.

PERSONAL MENTION.

A RECENT visitor to this country was Herr Wilhelm Siercke, a director in the important German rubber manufacturing concern—the Hannover-sche Gummikamm Co., Actiengesellschaft. This was Herr Siercke's first visit to the United States and from his expressions of appreciation of things American it is not likely to be his last.

Recent reports from Montreal state that Mr. D. Lorne McGibbon, president of the Canadian Consolidated Rubber Co., Limited, whose health was reported recently in these columns to have become impaired, has already experienced favorable results from his sojourn in the Adirondacks.

Mr. W. H. Lockwood, at one time treasurer of the Davidson Rubber Co. (Boston), has purchased a farm near Millis, Massachusetts, some 10 miles out of Boston, and will devote himself to agricultural pursuits.

Mr. Robert J. Stokes, superintendent of the Trenton Rubber Manufacturing Co. (Trenton, New Jersey), was married on April 23 to Miss V. Dickson, daughter of the late Judge Dickson, of Jersey City.

Only favorable reports have been current of late regarding the health of Colonel Samuel P. Colt, who for some time was taking a rest at Palm Beach, Florida. He was able to attend meetings of the directors and executive committee of the United States Rubber Co. on April 2, in which he took an active part.

Mr. B. G. Work, president of The B. F. Goodrich Co. (Akron, Ohio), sailed for Europe on April 9, to be gone some six weeks, his itinerary covering Germany, France, Italy, and England.

Mr. Charles A. Daniel, of the Quaker City Rubber Co. (Philadelphia), is making a short visit to Europe.

Mr. George E. Austin, of the Imperial Rubber Co. (New York), lately returned from a three months absence in Europe.

Mr. Emmett A. Saunders, president of the Mishawaka Woolen Manufacturing Co. (Mishawaka, Indiana), has recently been touring in Europe.

A recent visitor at the offices of THE INDIA RUBBER WORLD was Mr. William H. Miner, nephew of S. H. C. Miner, and manager of the Granby Rubber Co. (Granby, Quebec). Mr. Miner has been ten years in the rubber shoe business, working up through every department, and is accounted one of the best equipped and most thorough rubber shoe men in the Dominion.

Mr. H. D. Warren, of The Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, has been in Europe for the past two or three months.

C. M. Tucker, general sales agent of the rubber boot department of William H. Walker, at Buffalo, New York, a well known traveling man for more than 20 years, died suddenly while visiting his wife in a hospital in Bradford, Pennsylvania.

Mr. F. C. Hood, treasurer of the Hood Rubber Co. (Boston), sailed for Europe on the *Cymric* on April 22, to be gone about two months.

The *Brazilian Review* of March 24 said: "It is possible and indeed likely that the curtailment of prices may bring about a shortage of production on the Amazon next year, but this year the rubber is gathered and has to be paid for, for which reason it must be sold, whatever it may fetch."

MR. RYDER'S NEW CONNECTION.

MR. FREDERICK T. RYDER has become associated with the Apsley Rubber Co., of Hudson, Massachusetts. His headquarters for



FREDERICK T. RYDER.

the present will be in the Boston office, which is in charge of Mr. W. B. Loughton, who for so many years has been the company's selling agent, and is now also treasurer of the corporation. Mr. Ryder's familiarity with the rubber footwear trade is second to that of no one else identified with it, owing to his long connection with the Boston Rubber Shoe Co. He was for years

private secretary to the late Mr. Converse, the head of the Boston company. At the same time he filled the office of secretary of that company, to which were added in time the duties of assistant general manager.

SOURCES OF RUBBER.

A REPORT on recent developments in Portuguese East Africa, in *Bulletin of the Imperial Institute* (London, No. 1, 1907) mentions, among the rubber yielding plants in that region *Landolphia Thollonii*, the source of "root rubber" [German, *Wurzelkautschuk*; French, *caoutchouc des herbes*], illustrated in THE INDIA RUBBER WORLD, May 1, 1903 (page 261). This would indicate that the distribution of this valuable plant is very wide—practically across the African continent.

A recent *Bulletin of the Imperial Institute* (London) states that there is now scarcely any rubber in the British West African colony of Gambia, and that most of the rubber exported from the colony comes from neighboring French territory.

The imperial biological-agricultural institute at Amani, German East Africa, is reported to have made a number of analyses of interest of rubber from the native *Landolphas* and also from several foreign species introduced there for cultivation.

THE HOME OF BOLIVIAN RUBBER.

IN his "Seeking Rubber in Bolivia, and Other Elastic Experiences," Mr. Quincy Tucker gives, in the form of letters of an explorer, a readable account of a notable rubber producing region which has been visited by few outsiders. His book closes with some details of interest regarding the past unsuccessful efforts to circumvent the Madeira river falls with a railway, and the present plans for reaching the rubber fields by that route.

Review of the Crude Rubber Market.

THE month past closed with a more active demand for the leading grades of rubber and an advancing tendency in prices. In various departments of the industry the factories are being operated more fully than for some time past. The rubber footwear factories are getting to work, after a longer shut-down than usual, and the tire makers generally are reported to be busy.

Another fact tending to influence the situation is the approach of the end of the Pará crop season, with indications of a smaller yield than last year, though still above the average. The arrivals of all grades of rubber at Pará to the end of April in each of five years past have been as follows:

July 1, 1903, to April 30, 1904.....	27,570 tons
July 1, 1904, to April 30, 1905.....	29,330 tons
July 1, 1905, to April 30, 1906.....	30,520 tons
July 1, 1906, to April 30, 1907.....	33,880 tons
July 1, 1907, to April 28, 1908.....	31,300 tons

There are always elements of uncertainty in Amazon shipping, however, and our most recent mail advances intimate that the future of prices depends somewhat upon the extent of the supplies of rubber still to come down the river. But it is unusual for large quantities to arrive after May 1.

The Antwerp monthly sale, on April 23, at which about 550 tons were sold, again went off at a decided advance, which has led to a better demand and a firmer market for Africans.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and April 30—the current date:

Following are the quotations of New York for Pará grades one year ago, one month ago, one month ago, and April 30—the current date:

PARA.	May 1, '07.	Apr. 1, '08.	Apr. 30.
Islands, fine, new.....	115 @ 116	76@77	79@80
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	117 @ 118	77@78	83@84
Upriver, fine, old.....	119 @ 120	80@81	85@86
Islands, coarse, new.....	67 @ 68	41@42	43@44
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	91 @ 92	55@56	58@59

Upriver, coarse, old.....	none here	none here	none here
Caucho (Peruvian), sheet.....	73 1/2 @ 74	45 @ 46	45 @ 46
Caucho (Peruvian), ball.....	86 @ 87	55 @ 56	56 @ 57
Ceylon (Plantation), fine sheet.....	135 @ 136	83 @ 84	87 @ 88

AFRICAN.

Sierra Leone, 1st quality.....	65 @ 66	Lopori ball, prime.....	73 @ 75
Massai, red.....	65 @ 66	Lopori strip, prime.....	58 @ 60
Benguella.....	45 @ 46	Madagascar, pinky.....	63 @ 64
Accra flake.....	12 @ 13	Ikelemba.....	none here
Cameroon ball.....	45 @ 46	Soudan niggers.....	53 @ 54

CENTRALS.

Esmeralda, sausage.....	58 @ 59	Mexican, scrap.....	54 @ 55
Guayaquil, strip.....	43 @ 44	Mexican, slab.....	40 @ 41
Nicaragua, scrap.....	55 @ 56	Mangabeira, sheet.....	42 @ 43
Panama.....	42 @ 43	Guayule.....	29 @ 30

EAST INDIAN.

Assam.....	65 @ 68	Borneo.....	26 @ 27
Late Pará cables quote:		Per Kilo.	
Islands, fine.....	38 @ 40	Upriver, fine.....	48 @ 50
Islands, coarse.....	18 @ 20	Upriver, coarse.....	38 @ 40
Latest Manãos advices:		Exchange.....	15 3/32 d.

Upriver, fine.....	48 @ 50	Exchange.....	15 5/8 d.
Upriver, coarse.....	28 @ 30		

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show an advance, as compared with last month:

Old rubber boots and shoes—domestic.....	6 1/4 @ 6 1/2
Old rubber boots and shoes—foreign.....	5 1/2 @ 6
Pneumatic bicycle tires.....	6 @ 6 1/2
Automobile tires.....	6 @ 6 1/2
Solid rubber wagon and carriage tires.....	7 @ 8
White trimmed rubber.....	10 1/2 @ 11
Heavy black rubber.....	4 1/4 @ 4 1/2
Air brake hose.....	3 3/4 @ 4
Garden hose.....	2 @ 2 1/4
Fire and large hose.....	2 3/4 @ 3 1/4
Matting.....	1 1/2 @ 1 5/8

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.			Total 1908.	Total 1907.	Total 1906.
	Fine and Medium.	Coarse.	1008.			
Stocks, February 20.....	110	33 = 152	109	358		
Arrivals, March.....	1105	485 = 1050	1090	1415		
Aggregating.....	1284	518 = 1802	2105	1773		
Deliveries, March.....	1022	400 = 1482	2040	1378		
Stocks, March 31.....	262	58 = 320	125	395		
		PARA.	ENGLAND.			
		1908.	1907.	1906.	1908.	1907.
Stocks, February 20.....	1305	485	737	1305	449	875
Arrivals, March.....	3220	4975	2795	1085	1180	866
Aggregating.....	4585	5160	3532	3050	1635	1741
Deliveries, March.....	3610	4175	3390	1075	825	836
Stocks, March 31.....	975	985	130	1975	810	905
World's visible supply, March 31.....	4,912	3,894	3,269			
Para receipts, July 1 to March 31.....	24,415	25,435	24,264			
Para receipts of caucho, same dates.....	4,275	3,975	3,705			
Afloat from Para to United States, March 31.....	287	748	757			
Afloat from Para to Europe, March 31.....	1,355	1,226	1,076			

Liverpool.

EDMUND SCHLUTER & Co. report [March 31]:

Para grades were again very active and prices show heavy fluctuations. On the 12th of the month bull speculation caused an advance to 3s. 8d. for fine, 2s. 6d. for scrappy negroheads, and 2s. 6d. for ball. It was followed by the inevitable relapse, and at the close quotations were no better than 3s. 2½d. for hard and soft fine; 2s. 3d. for Manãos negroheads, and 2s. 2½d. @ 2s. 3d. for caucho ball.

The visible supply remains larger than any recorded in previous years, in spite of the reduction of the Amazon crop, and if any proof had been wanted of reduced consumption, the figures given below would clearly express the same. Although the opinion prevails that trade conditions show some slight improvement, there are nowhere any clear indications of increased orders to manufacturers. The view expressed in our circular of February 29, therefore, will hold good for the near future, while the estimated further reduction of receipts during April, with a possibly more pronounced trade improvement, may make for better markets later on.

THE WORLD'S VISIBLE SUPPLY OF PARA, MARCH 31.

	1908.	1907.	1906.	1905.	1904.	1903.
Tons.....	7188	5255	4680	4385	2986	4995
Prices, hard fine.....	3/2¼	4/11¼	5/5	5/6	4/8½	3/9¼

LIVERPOOL STOCKS OF AFRICAN RUBBER, MARCH 31.

	1908.	1905.	1902.	1901.	1900.
1908.....	385	364	513		
1907.....	373	402	862		
1906.....	344	387	603		

WILLIAM WRIGHT & Co. report [April 1]:

Fine Para.—The market, during the month, has been characterized by more or less violent fluctuations due entirely to speculation—in fact, a pure gamble. Manufacturers have bought sparingly and in doing so have we think acted wisely; until there is more "daylight" in the situation, caution is necessary. Stocks declared and undeclared are heavy, but manufacturers must not forget that prices are lower than they have been for a decade, that money is cheap, and that every month brings nearer a return of normal trade condition in America, and that a return to these conditions means an improved demand and an increased price. In our opinion 3s. 2d. ought to prove a fairly safe basis for a manufacturer to operate on. To form any opinion of the quantity sold and fluctuations in prices during this month would be futile. Considerably more than half the quantity reported sold are only sales and resales—in other words, "paper contracts"—but at the same time there is a possibility that the receipts of the remaining three months of the crop will not equal those of last season.

Antwerp.**RUBBER ARRIVALS AT ANTWERP.**

MARCH 9.—By the *Leopoldville*, from the Congo:

Bunge & Co. (Société Générale Africaine).....	kilos	111,000
Do.....		151,000
Do (Chemins de fer Grands Lacs).....		9,500
Do (Anversoise).....		19,600
Do (Comité Spécial Katanga).....		2,700
Do (Comptoir Commercial Congolais).....		1,200
Société Coloniale Anversoise (Belge du Haut Congo).....		3,400
Do (Cie du Lomami).....		6,700

PARA RUBBER VIA EUROPE.

March 26.—By the <i>Mauretania</i> —Liverpool:		
New York Commercial Co. (Fine).....		5,000
April 4.—By the <i>Unibet</i> —Liverpool:		
New York Commercial Co. (Fine).....	70,000	
Poel & Arnold.....	27,000	
W. L. Gough Co. (Fine).....	2,000	105,000
April 8.—By the <i>Prinzess</i> —Hamburg:		
New York Commercial Co. (Fine).....	11,500	
W. L. Gough Co. (Fine).....	6,500	

L. & W. Van de Velde (Cie. du Kasai).....	91,000	
Do.....	1,500	
G. & C. Kreglinger (Société La Lobay).....	5,000	402,600

RUBBER ARRIVALS AT ANTWERP.

MARCH 30.—By the *Bruxellesville*, from the Congo:

Bunge & Co. (Société Générale Africaine).....	kilos	54,200
Do.....		64,500
Do (Chemins de fer Grands Lacs).....		500
Do (Comité Spécial Katanga).....		360
Do (Anversoise).....		66,800
Do (Comptoir Commercial Congolais).....		22,200
Do (Cie. du Kasai).....		38,000
Société Coloniale Anversoise (Belge du Haut Congo).....		700
Do (Sud Cameroun).....		10,800
Société Générale de Commerce (Société La Lobay).....		12,900
M. S. Colis.....		3,300
L. & W. Van de Velde.....		3,500
		277,760

ANTWERP RUBBER STATISTICS FOR FEBRUARY.

	1908.	1907.	1906.	1905.	1904.
Stocks, Jan. 31.....	1,200,009	618,650	518,695	299,348	426,165
Arrivals in February.....	277,443	598,332	414,899	621,946	364,406
Congo sorts.....	255,000	549,803	338,905	496,318	290,901
Other sorts.....	22,443	48,499	75,994	125,628	73,505
Aggregating.....	1,537,452	1,216,982	933,594	921,294	790,631
Sales in February.....	630,348	613,121	618,906	363,894	455,541
Stocks, February 29.....	907,104	603,861	614,688	557,400	335,090
Arrivals since Jan. 1.....	825,411	916,024	1,019,928	947,027	886,725
Congo sorts.....	750,451	792,669	753,518	736,027	676,682
Other sorts.....	65,960	123,355	266,410	211,000	210,043
Sales since Jan. 1.....	925,201	970,347	1,140,427	930,988	1,162,535

RUBBER STATISTICS FOR MARCH.

	1908.	1907.	1906.	1905.	1904.
Stocks, Feb. 20.....	907,104	603,861	614,688	557,400	335,090
Arrivals in March.....	692,398	470,734	650,562	334,000	751,077
Congo sorts.....	587,972	358,496	521,264	266,697	646,124
Other sorts.....	104,426	58,238	138,298	67,903	104,953
Aggregating.....	1,599,502	1,020,595	1,274,250	801,400	1,086,167
Sales in March.....	402,610	295,957	632,600	507,455	385,432
Stocks, March 31.....	1,136,892	725,538	641,650	323,945	700,735
Arrivals since Jan. 1.....	1,317,800	1,332,758	1,670,490	1,281,027	1,637,802
Congo sorts.....	1,347,423	1,151,165	1,274,782	1,002,124	1,322,806
Other sorts.....	170,380	181,593	404,708	278,903	314,996
Sales since Jan. 1.....	1,387,811	1,265,404	1,773,027	1,498,443	1,547,967

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

MARCH 27.—By the *Amazonense* from Manãos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.....	425,300	95,800	84,800	26,100 =	632,000
Poel & Arnold.....	225,900	41,600	80,800	39,600 =	393,900
New York Commercial Co.....	106,500	17,800	45,800	8,900 =	179,000
General Rubber Co.....	60,300	15,000	72,800	200 =	157,300
William E. Peck & Co.....	12,900	.....	16,500	..... =	29,400
C. P. dos Santos.....	.....	.....	20,700	..... =	20,700
Edmund Reeks & Co.....	6,100	1,300	8,400	700 =	16,500
Hegemeyer & Brunn.....	2,800	5,900	.....	..... =	8,700
Total.....	848,800	171,500	350,700	75,500 =	1,446,500

APRIL 2.—By the steamer <i>Obidense</i> from Manãos and Pará:		
Poel & Arnold.....	142,000	76,400
General Rubber Co.....	38,800	6,600
New York Commercial Co.....	63,000	7,700
C. P. dos Santos.....	26,300	2,500
William E. Peck & Co.....	14,400	700
Edmund Reeks & Co.....	5,000	700
Hegemeyer & Brunn.....	2,800	5,900
A. T. Morse & Co.....	1,700	300
Total.....	207,600	94,900

APRIL 14.—By the steamer <i>Maranhense</i> from Manãos and Pará:		
General Rubber Co.....	93,300	18,000
New York Commercial Co.....	24,400	38,600
A. T. Morse & Co.....	30,300	8,500
Hegemeyer & Brunn.....	24,100	700
C. P. dos Santos.....	23,200	10,000
G. Amsinck & Co.....	6,300	600
Poel & Arnold.....	.....	.....
Edmund Reeks & Co.....	5,700	700
Crossman & Van Sicken.....	.....	6,000
Total.....	207,300	77,100

APRIL 18.—By the steamer <i>Aere</i> , from Pará:		
G. Amsinck & Co.....	28,000	7,000
	15,000 =
		50,000

APRIL 25.—By the <i>Mauretania</i> —Liverpool:		
New York Commercial Co. (Caucho).....	6,500	23,500
APRIL 4.—By the <i>Vaderland</i> —Antwerp:		
W. L. Gough Co. (Fine).....	.....	6,500
APRIL 16.—By the <i>Utruria</i> —Liverpool:		
New York Commercial Co. (Fine).....	.....	35,000
APRIL 17.—By the <i>Mauretania</i> —Liverpool:		
New York Commercial Co. (Fine).....	.....	33,500

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it **does not blow under cure.**

WRITE FOR PRICES.

Massachusetts Chemical Co.
WALPOLE, MASS.

Operates Walpole Rubber Works; Walpole Varnish Works.

WE ARE OFFERING SCRAP RUBBER AT LOW PRICES



Theodore Hofeller & Company
BUFFALO, N. Y.

WE SOLICIT YOUR INQUIRIES



PARA EXPORTS OF INDIA-RUBBER, FEBRUARY, 1908 (IN KILOGRAMS).

EXPORTERS.	NEW YORK.				TOTAL.	EUROPE.				TOTAL.	TOTAL.
	Fine.	Medium.	Coarse.	Caucho.		Fine.	Medium.	Coarse.	Caucho.		
Schrader, Gruner & Co.....	82,509	28,192	48,475	7,482	166,658	175,497	13,330	70,978	75,510	335,285	501,943
Ad. H. Alden	70,536	9,974	31,520	...	112,039	54,003	12,707	36,200	50,672	159,582	271,621
Gordon & Co.....	09,972	11,242	84,759	577	106,550	36,012	6,701	1,147	27,925	71,875	238,425
Scholz, Hartje & Co.....	44,936	11,597	3,042	950	61,095	66,464	9,404	56,319	12,068	144,315	205,410
R. Suarez & Co.....	...	...	...	...	...	147,445	12,423	7,149	5,213	172,230	172,230
Guilh. A. de Miranda Filho.....	28,480	7,200	4,200	...	39,880	73,004	9,820	10,639	6,000	99,523	139,403
Leite & Co.....	74,760	8,086	7,847	10,332	101,025	...	...	...	...	...	101,925
J. Marques & Co.....	9,690	1,300	29,370	...	40,420	26,641	5,000	19,247	10,254	61,142	101,562
Alves Poraga & Co.....	60,852	6,575	2,757	...	70,184	...	...	...	...	...	70,184
Luiz de Mendonça & Co.....	...	...	...	...	...	56,440	9,010	4,620	...	70,070	70,070
De Lagotellerie & Co.....	14,790	3,060	51,150	990	69,990	...	...	...	...	...	69,990
Braga Sobra, & Co.....	...	...	...	...	...	41,140	6,120	2,700	...	49,960	49,960
E. Pinto Alves & Co.....	680	...	10,890	...	11,570	7,310	...	16,600	...	23,910	35,480
Pires Teixeira & Co.....	3,570	...	8,250	...	11,820	5,780	...	5,610	...	11,390	23,210
R. A. Antunes & Co.....	...	...	...	...	...	2,800	1,300	1,850	660	6,800	6,800
R. O. Ahlers & Co.....	...	...	...	...	...	629	170	303	1,832	2,994	2,994
From Itacoatiara .....	...	...	...	...	...	1,602	...	...	...	1,602	1,602
Sundry small shippers.....	16,000	3,815	3,300	...	23,115	2,890	...	2,640	...	5,530	28,645
Manaos direct	572,400	138,620	200,978	143,877	1,061,875	1,097,426	145,620	258,215	666,300	2,167,561	3,229,430
Iquitos direct.....	...	...	...	...	...	37,255	3,571	29,613	129,105	199,544	199,544
Total, February	1,040,175	230,591	493,147	164,208	1,937,121	1,832,458	235,386	524,020	991,539	3,583,403	5,520,524
Total, January	851,402	160,204	450,219	100,837	1,622,662	1,341,043	211,000	378,900	616,237	2,547,240	4,169,902

PARA EXPORTS OF INDIA-RUBBER, MARCH, 1908 (IN KILOGRAMS).

EXPORTERS.	NEW YORK.				TOTAL.	EUROPE.				TOTAL.	TOTAL.
	Fine.	Medium.	Coarse.	Caucho.		Fine.	Medium.	Coarse.	Caucho.		
Schrader, Gruner & Co.....	160,093	33,759	98,928	27,837	321,487	240,487	35,997	54,034	39,878	370,780	692,267
Scholz, Hartje & Co.....	38,450	12,473	19,070	1,230	71,238	128,343	25,408	25,800	60,578	240,255	317,493
Gordon & Co.....	71,020	15,058	83,165	2,014	171,257	52,300	14,620	10,800	26,190	104,000	275,323
R. Suarez & Co.....	...	...	...	...	...	171,026	8,031	12,889	44,369	235,815	235,815
R. O. Ahlers & Co.....	...	...	...	...	...	35,168	157	8,450	30,055	73,830	73,830
E. Pinto Alves & Co.....	14,323	359	17,865	...	32,547	14,110	...	22,110	...	36,220	68,767
Ad. H. Alden	10,980	4,844	14,081	1,980	37,885	11,448	2,832	2,310	10,230	20,820	64,705
J. Marques & Co.....	5,260	680	11,110	340	17,690	17,510	1,870	21,780	330	41,490	50,186
De Lagotellerie & Co.....	9,010	680	35,040	...	45,330	...	...	...	...	...	45,330
Singlehurst, Brocklehurst & Co.....	...	...	...	...	...	25,005	...	3,559	495	29,059	29,059
Pires Teixeira & Co.....	4,420	...	6,930	...	11,350	5,780	...	7,020	...	13,700	25,050
B. A. Antunes & Co.....	9,484	2,410	6,987	2,423	21,304	...	...	...	...	...	21,304
Sundry small shippers.....	...	...	...	...	...	11,730	510	330	...	12,570	12,570
Itacoatiara direct .....	...	...	...	...	...	4,493	...	3,243	807	8,543	8,543
Manaos direct	352,650	101,602	153,470	81,471	689,199	653,409	128,682	135,507	474,005	1,392,083	2,081,882
Iquitos direct.....	...	...	...	...	...	33,003	13,832	21,754	137,049	205,038	205,038
Total, March	682,575	172,165	447,252	117,301	1,419,293	1,409,736	232,270	330,802	830,652	2,803,409	4,222,762
Total, February	1,040,175	230,591	493,147	164,208	1,937,121	1,832,458	235,386	524,020	991,539	3,583,403	5,520,524
Total, January	851,402	160,204	450,219	100,837	1,622,662	1,341,043	211,000	378,900	616,237	2,547,240	4,169,902

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

CENTRALS.

POUNDS.

MARCH 24.—By the *Cienfuegos*=Tampico:

Continental-Mexican Rubber Co.	*55,000
Edward Maurer	*45,000
Poel & Arnold	*40,000 *140,000

MARCH 28.—By the *Esperanza*=Mexico:

Graham, Hinkley & Co.	1,500
Smithers & Nordenholt Co.	1,500
H. Marquardt & Co.	1,000 4,000

MARCH 28.—By the *Creole*=New Orleans:

G. Amsinck & Co.	2,500
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MARCH 28.—By the *Patricia*=Hamburg:

Poel & Arnold	15,500
Poel & Arnold	*22,000 37,500

MARCH 30.—By the *Vigilancia*=Tampico:

Continental-Mexican Rubber Co.	*55,000
Edward Maurer	*55,000
L. Johnson & Co.	*7,000 *117,000

MARCH 31.—By the *Colon*=Colon:

Meyer Hecht	4,000
West Coast Rubber Co.	1,500
Piza, Nephews & Co.	1,000
A. Rosenthal & Sons	1,000
W. R. Grace & Co.	1,000 8,500

APRIL 1.—By the *El Norte*=Galveston:

Edward Maurer	*22,500
---------------	---------

APRIL 1.—By the *Sibiria*=Colon:

G. Amsinck & Co.	4,000
Isaacs Samuels	2,500
American Trading Co.	1,000
A. Held	1,000
Wessels, Kulenkampf & Co.	1,000 9,500

APRIL 2.—By the *Seigmunde*=Bahia:

New York Commercial Co.	11,500
J. H. Rossbach & Bros.	11,000 22,500

APRIL 3.—By the *Altai*=Savanilla:

G. Amsinck & Co.	3,500
------------------	-------

APRIL 4.—By the *Merida*=Frontera:

Harburger & Stack	3,500
E. Steiger & Co.	1,500
Graham, Hinkley & Co.	1,500
H. Marquardt & Co.	1,500
G. Amsinck & Co.	1,000 9,000

APRIL 4.—By the *El Rio*=Galveston:

Continental-Mexican Rubber Co.	27,500
--------------------------------	--------

APRIL 6.—By the *Advance*=Colon:

G. Amsinck & Co.	5,500
------------------	-------

APRIL 8.—By the *Joachim*=Colombia:

Roldan & Van Sickle	1,500
A. Rosenthal & Sons	1,000
Maldonado & Co.	1,000 3,500

APRIL 13.—By the *Monterey*=Frontera:

Harburger & Stack	10,000
E. Steiger & Co.	5,000 15,000

APRIL 13.—By the *Panama*=Colon:

G. Amsinck & Co.	6,000
Piza, Nephews & Co.	1,500
H. Marquardt & Co.	1,000
Andreas & Co.	1,000
A. Santos & Co.	1,000 10,500

APRIL 13.—By the *El Cid*=Galveston:

Continental-Mexican Rubber Co.	*27,500
--------------------------------	---------

APRIL 15.—By the *Matanzas*=Tampico:

Edward Maurer	*55,000
E. N. Tibbals & Co.	5,000
Flint & Co.	*3,500 63,500

APRIL 15.—By the *Eithel*=Colon:

G. Amsinck & Co.	5,500
Kunhardt & Co.	3,000
J. W. Wilson & Co.	2,500
De Lima Cortissoz & Co.	2,000 13,000

APRIL 16.—By the *Alliance*=Colon:

J. Brandon & Bros.	2,800
--------------------	-------

APRIL 17.—By the *Hugin*=Tampico:

New York Commercial Co.	*110,000
Edward Maurer	*95,000
Continental-Mexican Rubber Co.	*27,000
Poel & Arnold	*9,000
Flint & Co.	*3,000
For Europe	*50,000 *300,000

APRIL 18.—By the *Merida*=Vera Cruz:

H. Marquardt & Co.	4,500
E. Steiger & Co.	1,000
American Trading Co.	1,000 6,500

APRIL 18.—By the *Acre*=Bahia:

A. Hirsch & Co.	10,000
A. D. Hitch & Co.	6,500 16,500

* This sign, in connection with imports of Centrals, denotes Guayule rubber.

AFRICANS.

POUNDS.

MARCH 24.—By the *Hermann*=Lisbon:

George A. Alden & Co.	22,500
-----------------------	--------

MARCH 26.—By the *Carmania*=Liverpool:

General Rubber Co.	43,000
Poel & Arnold	7,000
George A. Alden & Co.	30,000 95,500

MARCH 28.—By the *Patricia*=Hamburg:

A. T. Morse & Co.	45,000
Poel & Arnold	7,000
W. L. Gough Co.	7,000 59,000

MARCH 28.—By the *Mauretania*=Liverpool:

George A. Alden & Co.	30,000
-----------------------	--------

MARCH 30.—By the *Celtic*=Liverpool:

George A. Alden & Co.	25,000
-----------------------	--------

APRIL 1.—By the *Irraine*=Havre:

George A. Alden & Co.	18,000
-----------------------	--------

APRIL 3.—By the *Lo-staken*=Lisbon:

General Rubber Co.	50,000
George A. Alden & Co.	11,000 67,000

APRIL 4.—By the *Georgie*=Liverpool:

George A. Alden & Co.	5,000
-----------------------	-------

APRIL 4.—By the *Umbria*=Liverpool:

Poel & Arnold	27,000
General Rubber Co.	22,500
Joseph Cantor	13,500
George A. Alden & Co.	11,000
W. L. Gough Co.	3,500
Livesay & Co.	3,000 80,500

APRIL 6.—By the *America*=Hamburg:

Poel & Arnold	22,500
George A. Alden & Co.	11,000 33,500

APRIL 6.—By the *Lucania*=Liverpool:

H. A. Gould & Co.	7,000
Livesay & Co.	3,500 10,500

APRIL 7.—By the *Armenian*=Liverpool:

Poel & Arnold	46,000
W. L. Gough Co.	2,500 48,500

APRIL 8.—By the *Pretoria*=Hamburg:

George A. Alden & Co.	22,500
Poel & Arnold	15,000
A. T. Morse & Co.	11,500
W. L. Gough Co.	9,000
Rubber Trading Co.	7,000 65,000

APRIL 8.—By the *Finland*=Antwerp:

A. T. Morse & Co.	13,500
H. A. Gould & Co.	5,000 18,500

APRIL 9.—By the *Hudson*=Havre:

Poel & Arnold	150,000
A. T. Morse & Co.	7,000 157,000

APRIL 9.—By the *Caronia*=Liverpool:

Poel & Arnold	38,000
Livesay & Co.	11,500
General Rubber Co.	11,500 61,000

APRIL 10.—By the *Lusitania*=Liverpool:

George A. Alden & Co.	15,000
-----------------------	--------

APRIL 13.—By the *Lorraine*=Havre:

General Rubber Co.	15,000
W. L. Gough Co.	5,000 20,000

APRIL 15.—By the *Vaderland*=Antwerp:

George A. Alden & Co.	90,000
A. T. Morse & Co.	75,000
Joseph Cantor	45,000
General Rubber Co.	9,000 219,000

APRIL 15.—By the *Herselia*=Lisbon:

General Rubber Co.	56,000
--------------------	--------

APRIL 16.—By the *Teignac*=Bordeaux:

George A. Alden & Co.	22,500
-----------------------	--------

APRIL 16.—By the *Etruria*=Liverpool:

General Rubber Co.	50,000
George A. Alden & Co.	33,000
Poel & Arnold	3,500
Livesay & Co.	2,000 88,500

APRIL 17.—By the *Lincoln*=Hamburg:

General Rubber Co.	30,000
A. T. Morse & Co.	11,000
W. L. Gough Co.	2,500 43,500

APRIL 18.—By the *Cedric*=Liverpool:

General Rubber Co.	55,000
--------------------	--------

APRIL 17.—By the *Mauretania*=Liverpool:

George A. Alden & Co.	22,500
-----------------------	--------

APRIL 20.—By the *Amsterdam*=Rotterdam:

A. T. Morse & Co.	22,500
-------------------	--------

APRIL 20.—By the *Florida*=Havre:

George A. Alden & Co.	22,000
C. P. dos Santos	5,000 27,000

APRIL 21.—By the *Zeeland*=Antwerp:

A. T. Morse & Co.	11,500
Poel & Arnold	11,500 23,000

EAST INDIAN.

MARCH 25.—By the *Albenga*=Singapore:

Poel & Arnold	13,500
Joseph Cantor	10,000
Wabber & Co.	9,000
H. Pauli & Co.	5,500 38,000

MARCH 27.—By the *Majestic*=London:

Poel & Arnold	*22,500
---------------	---------

MARCH 28.—By the *Schadfrils*=Colombo:

A. T. Morse & Co.	*17,500
-------------------	---------

APRIL 2.—By the *Oceanic*=London:

A. T. Morse & Co.	*5,500
Robinson & Stiles	4,500 10,000

APRIL 8.—By the *Mesaba*=London:

General Rubber Co.	*13,500
George A. Alden & Co.	*9,500 *20,000

APRIL 11.—By the *Kasenga*=Colombo:

A. T. Morse & Co.	*9,000
-------------------	--------

APRIL 13.—By the *Minnetonka*=London:

General Rubber Co.	*15,000
--------------------	---------

APRIL 21.—By the *Munichaha*=London:

Robinson & Stiles	5,000
-------------------	-------

* Denotes plantation rubber.

GUTTA-JELUTONG.

MARCH 25.—By the *Albenga*=Singapore:

Poel & Arnold	110,000
---------------	---------

GUTTA-PERCHA.

POUNDS.

MARCH 25.—By the *Albenga*=Singapore:

H. Pauli	22,500
----------	--------

MARCH 28.—By the *Patricia*=Hamburg:

Robert Soltan Co.	7,000
-------------------	-------

APRIL 4.—By the *Umbria*=Liverpool:

Earle Brothers	2,500
----------------	-------

APRIL 17.—By the *Lincoln*=Hamburg:

Robert Soltan & Co.	9,000
---------------------	-------

BALATA.

MARCH 24.—By the *Ryndam*=Rotterdam:

Earle Brothers	3,000
----------------	-------

MARCH 30.—By the *Parina*=Demerara:

George A. Alden & Co.	6,000
Frame & Co.	1,000 7,000

APRIL 8.—By the *Guiana*=Demerara:

George A. Alden & Co.	3,500
-----------------------	-------

APRIL 14.—By the *Saramaga*=Surinam:

G. Amsinck & Co.	22,500
------------------	--------

APRIL 20.—By the *Korona*=Demerara:

George A. Alden & Co.	2,000
-----------------------	-------

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—MARCH.

Imports.	Pounds.	Value.
India-rubber	6,305,713	\$3,167,152
Balata	20,314	8,475
Gutta-percha	19,271	10,566
Gutta-jelutong (Pontianok)	389,637	11,056

Total

6,794,935	\$3,197,249
-----------	-------------

Exports.

India-rubber	61,765	\$27,917
Reclaimed rubber	60,641	8,384
Rubber scrap imported	125,056	10,852

BOSTON ARRIVALS.

MARCH 30.—By the *Badenia*=Hamburg:

George A. Alden & Co., Africans	11,000
W. L. Gough Co., Africans	15,000

Total

26,000

GUTTA-PERCHA.

MARCH 4.—By the *Sagamore*=Liverpool:

George A. Alden & Co.	2,500
-----------------------	-------

MARCH 19.—By the *Cambrian*=London:

George A. Alden & Co.	3,500
-----------------------	-------

Total

6,000



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MAY 1, 1908.

No. 2.

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United States Imports of Rubber.

OFFICIAL returns for eight months ending February 31:

	1905-06.	1906-07.	1907-08.
United Kingdom.....pounds	5,714,955	7,052,129	3,077,416
Germany.....	2,469,119	3,020,953	1,500,819
Other Europe.....	5,505,612	6,252,431	3,814,463
Central America and British Honduras.....	866,100	796,824	663,985
Mexico.....	598,648	3,393,984	5,078,009
Brazil.....	10,604,529	25,734,430	19,108,932
Other South America.....	1,343,184	1,402,517	1,182,300
East Indies.....	1,283,446	1,608,220	852,500
Other countries.....	24,552	24,893	30,406
Total.....	37,461,145	49,280,387	35,464,839
Value.....	\$20,238,410	\$38,684,384	\$22,066,400
Average per pound.....	78 cents.	78.5 cents.	63.9 cents.

Plantation Rubber From the Far East.

EXPORTS OF CEYLON GROWN RUBBER.

Pounds.	Pounds.
To Great Britain.....332,219	To Italy.....90
To United States.....189,279	To Japan.....33
To Germany.....15,643	
To Australia.....11,034	Total, 1907.....556,080
To Belgium.....5,034	Total, 1906.....327,024
To France.....1,774	Total, 1905.....168,247
To Holland.....151	Total, 1904.....72,040
To India.....112	Total, 1903.....41,684
To Russia.....111	

EXPORTS FROM THE FEDERATED MALAY STATES.

States.	1906.	1907.
Perak.....pounds	149,640	255,530
Selangor.....	681,040	1,198,751
Negri Sembilan.....	198,112	530,004
Pahang.....		
Total.....	1,028,792	1,984,285

TOTAL EXPORTS FROM MALAYA.

[Including the produce of the Federated Malay States and some from neighboring territory.]

Pounds.	Pounds.
To Great Britain.....1,625,583	To Australia.....31,838
To Other Europe.....184,604	To Ceylon.....231,180
To United States.....4,183	
To Japan.....11,697	Total.....2,089,085

	1905.	1906.	1907.
From Singapore.....pounds	180,533	719,133	1,446,417
From Penang.....	48,267	98,636	642,668
Total.....	228,800	817,769	2,089,085

CEYLON RUBBER EXPORTS TO AMERICA, 1907.

VALUES in United States gold, reported by the American consul at Colombo:

Quarter ending March 31.....	\$54,985.00
Quarter ending June 30.....	94,680.00
Quarter ending September 30.....	76,135.58
Quarter ending December 31.....	82,279.60

Total, 1907.....\$308,080.18

These figures embrace not only Ceylon produce, but Malaya rubber exported through Ceylon.

YIELD OF PLANTATIONS (IN POUNDS).

	1907.	1908.
Vallombrosa Rubber Co.:		
Twelve months to March 31.....	156,922	225,281
Anglo-Malay Rubber Co.:		
January and February.....	19,011	47,532
Perak Rubber Plantations:		
Ten months to January 31.....	16,325	31,715
Kepitigalla Rubber Estates:		
Ten months to January 31.....	25,743	32,314
Consolidated Malay Rubber Estates:		
Three months to March 31.....	7,397	14,372

COMPLETE YIELDS.

	1906.	1907.
Seremban Estate Rubber Co.....	62,258	109,360
Kalutara Co.....		14,646
Damansara Rubber Co.....	11,904	39,233
Pataling Rubber Estates Syndicate.....	43,310	58,004
Golden Hope Rubber Estate.....	2,400	5,591
Highlands and Lowlands Para Rubber Co....	134,285	193,389

Rubber Receipts at Manaos.

DURING February and eight months of the crop season for three years [courtesy of Messrs. Scholz & Co.]:

	FEBRUARY.			JULY-FEBRUARY.		
FROM—	1908.	1907.	1906.	1907-08.	1906-07.	1905-06.
Rio Purus-Acre.....tons	1,693	1,092	1,232	7,191	5,224	5,978
Rio Madeira.....	482	539	614	2,308	2,663	2,410
Rio Juruá.....	873	424	293	3,044	2,091	2,512
Rio Javary-Iquitos.....	165	203	109	2,365	2,510	2,393
Rio Solimoes.....	88	123	75	1,037	781	842
Rio Negro.....	124	85	128	374	457	413
Total.....	3,425	2,526	2,451	16,319	14,335	14,548
Caucho.....	1,052	848	817	3,580	2,727	2,931
Total.....	4,477	3,304	3,268	19,899	17,062	17,479

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J. MAYWALD, Consulting Chemist
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inside of coat.....



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JUNE 1, 1908.

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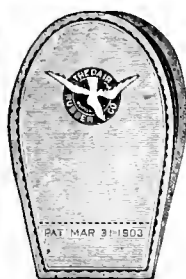


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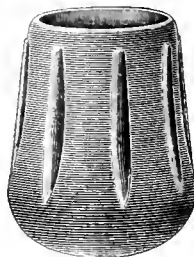
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AUTOMOBILES AND RUBBER.

THERE is no reason for the rubber interest to feel dubious with regard to the future so long as motor cars continue to be made and used in constantly increasing numbers, and this condition now appears to be as permanent as any other economic factor in present day life. If one were to judge of general business conditions in the United States by the status of the automobile industry alone, the conclusion might reasonably be that in no past time had the country been so prosperous. Each year adds to the number of horseless carriages here more than the total number registered in any other country on earth, and every indication points to the manufacture of a still greater number in each year to come, until the horse-drawn vehicle will be visible only in museums, alongside relics of Egypt and Assyria and Pompeii.

The business depression in America during the past half year has been accompanied by a concerted disposition on the part of manufacturers and others who build for the future to limit production solely to immediate demands. Great concerns which formerly were active twelve months in the year producing goods which might reasonably, judging from past experience, find a market ultimately, decided to make nothing which

was not called for in specific orders actually in hand.

The result is that such important organizations as the United States Rubber Co., whose latest annual report appears on another page of this issue, have in hand to-day an exceptionally small inventory of raw materials and finished goods. At the same time every effort has been made by them to bring together the largest possible volume of "quick assets"—cash and other realizable items. The fact that these concerns have been less active than in former years during the winter months is by no means to be taken as evidence of an unhealthy condition of trade and industry.

On the other hand, when the whole history of the year just closed comes to be written, we believe that the opinion will find support that decidedly healthful conditions have obtained. Why go on, year after year, making goods without an occasional taking of stock to see whether the rate of output was not in excess of the rate of development of the country? Such stock taking has now occurred, and the resumption of activity in the rubber industry, based upon the renewed liberal demand for goods of all kinds, is clearly reflected in the recent advances in the price of raw rubber.

But we have digressed here to consider the rubber industry as a whole, after starting out to discuss the automobile industry, which would not exist but for the rubber tire. This branch of the rubber industry was never so prosperous as at this moment. Not only is every tire maker of importance working overtime nowadays to meet the demands of customers, but the manufacture of rubber tires in America is more profitable to-day than ever before. It is not so long since the head of a certain rubber company declared that whereas tires had represented 55 per cent. in selling value of their output for a year, the remaining 45 per cent. of products had supplied the whole of the company's profits. During the past year the same company, with a largely increased production of automobile tires, has derived a handsome rate of profit from this line, though selling at distinctly lower prices.

The truth is that the automobile is too new a factor in life to have become definitely placed until now, and the rubber man, like everybody else concerned in its development, has required time in which to "find himself." The automobile is as firmly placed now, however, as an economic factor as the horse and wagon ever were, and seems likely to hold its own in days to come as long as the horse and wagon did in the past. All of which points to good business for the makers of rubber tires, year after year, on a scale which would make Charles Goodyear and Thomas Hancock turn incessantly in their graves if news could reach them of the great development which has taken place in the industry which they labored so long and so hard to develop, with such small rewards, measured by twentieth century conditions.

It may be in order here to observe that the automobile makers of the country have set a most commendable example during the past few months of so-called business depression in continuing business "at the old stand," foreseeing with marked sagacity the actual state of business and building machines for the demand that is now so active. Had manufacturers in more lines emulated their example the exposé of a few rotten banks in New York last October would never have resulted in anything so nearly resembling a panic.

All hail the automobile manufacturers, whose consistent attention to business has proved so great a godsend to the rubber industry of the country.

INTERNATIONAL PATENT PRACTICE.

THE new regulation in Great Britain, practically restricting patent protection to inventions and discoveries which shall be actually exploited in that country, marks a new tendency which is not unlikely to become general. Such a rule obtains already in France, and its adoption is being considered in Germany and the United States. And why not?

The provision in the American constitution for securing to inventors the sole control for a term of years of their discoveries was intended primarily for the encouragement of American invention and the development of domestic industries. Without doubt its application has tended enormously to the progress which has so rapidly placed the country in the front rank of industrial nations. But the liberality with which the nation has welcomed foreign ideas as well as men of foreign birth has placed us in the position to-day of protecting many European industries which profit on a large scale from the American patent laws without contributing directly one penny to the rewards of domestic labor.

The new idea, first developed practically by France, is that the nation shall not aid in any monopoly of an invention unless the same shall be developed to some extent in the country granting the patent. Else what return does that country get for the protection thus granted? What reason, in other words, exists for granting the patent to a foreigner?

These considerations apply with equal force to every industrial country; they might well be ignored by a country such as Greece or Brazil which do not rank to an important extent among manufacturing nations, but where some protection to the author of an important invention is only just and fair. Not that it is less just and fair in America or England or Germany, but the difference is that the people of one of these countries, where facilities exist for every branch of manufacture, should be permitted to benefit in some direct way in return for the patent protection granted to an alien.

It occurs to us that the time has arrived for an inter-

national patent bureau, the purposes of which should be (1) to determine what actually are new inventions, and therefore entitled to patents; (2) to supervise the carrying out of treaties relating to patents between the countries in interest, and (3) to secure actual protection to inventors—something which is now the exception rather than the rule. An inventor to-day, wherever his home, in order to secure a patent in whatever country must pay for a search in its archives to determine its novelty in that country, involving a heavy expense in case he should apply for protection throughout the civilized world. Why should there be more than one search of this kind?

It long has been the practice in England for the government, upon representation being made that a patented invention, whether domestic or foreign, is not being supplied sufficiently for the demand, to call upon the patentee to show cause why a license should not be granted to others to manufacture the article. The idea does not obtain there that a patent monopoly should be absolute, but that it should be considered with regard to the greatest possible good to the public, a reasonable regard being had to the interests of the inventor. It is consonant with this theory that a foreign inventor, protected by a patent on his discovery against competition in the country granting that patent, should be required to exploit it in some such way as to share his profits with the people of that country.

The details of patent law have changed materially of late years in many countries, and generally in the same direction, which seems to render more practicable now than at any time in the past the idea of an international patent system.

FINE RUBBER FOR 12½ CENTS.

THE cost of tapping eight-year-old *Hevea* trees and curing the rubber, on an important plantation in the Malay States, according to a report to the shareholders in the company owning it, for the last half of 1907 averaged 12½ cents (gold) per pound. The average yield of the trees for the year was about 3¼ pounds, or just twice the average for the preceding year, and a still larger yield is expected for 1908.

The cost of extraction and preparing rubber for market on this estate (one of the Anglo-Malay company's properties) has been reduced steadily, due, it is to be inferred, both to the increased productiveness of the tree—doubling in one year the output per acre—and to the increased experience of the operatives. Doubtless we shall hear later of a still lower production cost, but even 12½ cents per pound allows a very handsome margin of profit for a product which realizes 90 cents a pound or more after deducting freight and selling charges.

Of course, cost of administration and interest on the investment have to be considered, but the upkeep of

mature rubber trees is inexpensive, and the leading plantation companies now selling rubber seem not to have been overcapitalized. While there are no indications that rubber will go much lower than now—for some years at least—it is evident that the people who are producing 12½ cent rubber to-day need not worry about selling prices during the rest of their natural lives.

CONDITIONS IN AMERICA CONTINUE TO BE QUOTED ABROAD as the cause of the general depression in the rubber industry. We do not hear any similar reason given, however, for the unusual employment of operatives in the cotton industry of Great Britain, where, according to a high authority, there were recently 30,000 weavers idle. It is possible that like conditions have produced like results in industries generally on both sides the Atlantic.

OUR OLD FRIEND "RUBBER FAMINE" HAS BEEN DISCOVERED AGAIN—this time by the *New York Business and Finance*, according to which journal "the condition is serious." It is true that in many localities the native supply of rubber is vanishing, but we are not sufficiently gifted with foresight to behold with our contemporary the disappearance of the last rubber tree, or to agree with it that "the crisis will come with appalling suddenness and the vast fabric of capital built on the product will fall to the ground." We would advise a more placid frame of mind, in view of the near approach of the heated term.

THE ACTIVITY OF THE ELECTRICAL INDUSTRY is a most encouraging symptom of the general business situation. It is true that the electrical companies have not escaped the effects of the recent financial depression, but already they show evidences of rapid recuperation, which means, of course, that the thousand and one industries and businesses which call for the various applications of electricity are in a healthful condition. It is this great diversity in the uses of electricity that forms so secure a foundation for the suppliers of apparatus in this field. Not less interesting than the amount of business done by the General Electric Co. during 1907—upwards of \$70,000,000—is the fact that this sum relates to no less than 237,006 separate orders and contracts. Every new development in electrical applications seems to open the way for countless others; the installation of a lighting station in any town, for example, renders possible the supply of current for all kinds of industrial and household purposes, for which previously electricity was not or could not be used in that locality. Hence the General Electric Co. will with equal readiness contract to sell electric locomotives for the heaviest railway service, or electric flatirons for the household laundry, or electric chafing dishes. These smaller articles, by the way, are coming to form no mean share of the whole business in electrical supplies. The tendency is to employ electricity for every possible purpose, and the list of possibilities is not likely to become exhausted until human ingenuity has reached its limit.

THE RUBBER INDUSTRY IN NEW JERSEY came into existence almost as early as anywhere else, and has now become one of the most firmly established branches of manufacture in that state, ranking tenth in respect of the value of products in a list of 88 specified industries covered by the thirtieth annual report of the New Jersey bureau of statistics. For obvious reasons all such reports may be open to criticism as to their accuracy in matters of detail, while their general indications may command full respect. One point which seems to merit notice in the New Jersey state reports is that while the average holdings of shares in rubber corporations in that state in 1899 was stated definitely at \$18,260, the number of stockholders had so increased by 1906—from 356 to 4937—that the average, while not specifically stated, apparently is not over \$2500, reference being had, of course,

to par values. This tendency, it occurs to us, is a desirable one. The wider the distribution of shares in any legitimate permanent undertaking, and more particularly in an interest liable to be affected by legislation, the more apt will the public mind be correctly informed when any occasion for voting arises. In a community where every citizen with a few hundreds of dollars saved is part proprietor of a corporation, the proper regulation of corporations by law is much more likely to be discussed intelligently than where the opposite condition prevails, and the average voter is susceptible to the appeals of the political agitator to pull down everything in the shape of a corporation, regardless of its merits. On the whole, the manufacturing interest is a profitable one, and why should not every citizen be in a position personally to share in profits of this class?

THE UNCEASING PATENT GRIND.

THE patent office at Washington shows no sign of going out of business. During the last fiscal year (ending June 30, 1907) the number of applications filed for patents was 56,514 and the number of patents granted was 33,644—not counting design patents, reissues, trademarks, labels, and the like. The cash receipts were \$1,850,592.89, which provided for all expenses and left a surplus of \$275,103.19. All these figures are larger than under the same heads in any former year. The number of United States patents granted up to June 30, 1907, was 867,225, all on file at the office in Washington, in addition to about 3,000,000 patents granted in various foreign countries, all of which must be gone through in making any examination as to the novelty of inventions for which new patents are desired. Patent specifications continue to be in wide demand, the number of printed copies distributed last year having been 2,117,847, the sales realizing \$86,433.88. That the patent office is not doing a losing business is evident from the annual surplus of receipts over expenses for the past 46 years.

The library of the British patent office, established in 1855, had been visited to the end of 1907 by 2,975,547 readers. It has proved increasingly popular from the beginning, the number of readers last year (148,198) having been larger than in any other year. This library embraces the patent specifications of all countries and a very extensive collection of scientific journals, transactions of societies, and text books. THE INDIA RUBBER WORLD has been kept on file at this library since the establishment of the paper. The library is free to the public daily, and probably is more largely resorted to by persons concerned with inventions and patents and such matters than any other library in existence.

The extent of the patronage of this library may be more fully realized, perhaps, by considering that the total number of visitors calling for books at the Astor Library (a branch of the New York Public Library) during 1907 was only 185,994, including 5,491 who registered in the patent alcoves. It should be added, however, that the Astor Library has a large department of reference books and a periodical reading room, which may be visited without any registration, and the numerous readers in which are not counted. The Astor Library has on file the full specifications of all patents that have ever been granted in the United States, Great Britain, and several other countries.

THE plant described as "The Rubber Plant of Southern Europe" in THE INDIA RUBBER WORLD, March 1, 1908 (page 177)—*Atractylis gummifera*—is mentioned in a French pharmaceutical journal as one of the few recorded instances of a plant of the natural order *Compositæ* containing a poisonous principle. The fruit and receptacle are eaten without ill effect, but several fatal cases of poisoning with the root are on record. A product of the plant, potassium atractylate, is non-toxic for frogs, but is fatal to rabbits and dogs, producing tetanic convulsions like strychnine.

The Editor's Book Table.

INDIA-RUBBER AND ITS MANUFACTURE, WITH CHAPTERS ON GUTTA-PERCHA AND BALATA. By Hubert L. Terry, F. I. C. New York: D. Van Nostrand Co. 1907. [Cloth. 8vo. Pp. ix + 284. Price, \$2.]

THE INDIA RUBBER WORLD is glad to add to its library another book on india-rubber, this time by no less a writer than Hubert L. Terry. The book is well printed, substantially bound, and exceedingly well written. The illustrations are not many, but are good. An excellent index, something that every book on rubber should have, is a valuable part of the volume. As far as the subject matter goes the book certainly lives up to its preface. In that two page explanation the author expressly denies writing a "working guide or hand book" for the rubber manufacturer. It is for the general reader or the technologist in other lines who desires a brief statement of the rubber business as a whole. As long as the rubber business is so specialized, however, there are few manufacturers who will not find much of value in its pages, particularly in being able to grasp the general procedure in lines other than their own.

The twenty-four chapters into which the treatise is divided are really two score and four very excellent essays. In the first, which is historical, the author gives England, justly too, the credit for the first beginnings in the manufacture of rubber goods, the Hancock date of 1819 and the Macintosh date of 1820 certainly antedating anything in that line elsewhere. That was, however, before the discovery of vulcanization, and if one were to be really just to the industry its "establishment" should be taken as coincident with the first production of cured goods.

The chapter on crude rubber is excellent and considers all of the sorts that are on the market to-day, including guayule.

In the chapter on the chemical and physical properties of rubber Mr. Terry is very much at home, and as it were lets himself out a bit, as he does in the chapter following, on vulcanization.

Of all the chapters in the volume the one most interesting to the manufacturer will be that on substitutes, partly because England and the continent knew the so-called rubber substitute long before America did—and were able to do more with it. But when it comes to discussing reclaimed rubber, which Europe is only beginning to appreciate, he reflects the state of the art in his part of the world but not as it relates to the United States, for example. This is not in the way of criticism, but a statement of a difference due to view point.

On the use of rubber solvents and their recovery, the author shines. Here are no trade secrets to be carefully guarded, and the subject is of prime importance. It is dealt with most fully, and should be read by every mixer of solutions, and every producer of spreader work.

As for the other chapters, they cover proofing, druggists' sundries, tires, mechanical rubber goods, insulated wire, vulcanite, cut sheet, general compounding, gutta-percha, and balata, with some excellent suggestions as to the testing of vulcanized rubber goods.

Coming back to the author, Mr. Terry has a clear, concise, scholarly style, and knows much about rubber. For many years he has been a consulting expert, having done work for some of

the largest of the English manufacturers, and his conclusions are uniformly sound. His book is a good one and the trade will welcome it.

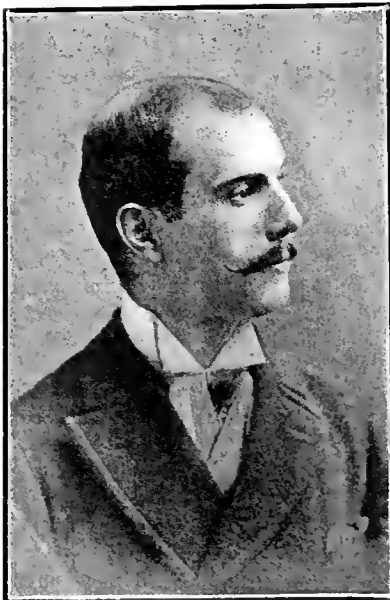
MEXICO AND HER PEOPLE OF TO-DAY. An account of the Customs, Characteristics, Amusements, History and Advancement of the Mexicans, and the Development and Resources of Their Country. By Nevin O. Winter. Boston: L. C. Page & Co. 1907. [Cloth. 8vo. Pp. vii + 405 + plates. Price, \$7.]

WHILE Mexico and her people have always been subjects of interest to the intelligent classes elsewhere, the recent growth of business relations between that republic and the United States render a knowledge of the southern country now of real importance to its northern neighbors. The book which Mr. Winter has written is not the work of a fleeting tourist, but is that of a man who has prepared himself by years of residence and travel

in the country, in connection with the reading of what has been written by his predecessors in that field. An authority on the subject asserts that this is "the very best book about Mexico that has been published in English for perhaps two generations." Be that as it may, the present reviewer has seen nothing comparable with it, and it can hardly fail to be read with interest whether the reader has business relations with Mexico or not. Besides being entertaining reading in general, this book may be recommended particularly on account of the help which it lends to the non Mexican in understanding the differences between the two civilizations north and south of the Rio Grande. Though changes are taking place in Mexico, the country is still conservative, and where customs have been established for centuries without change it is not strange that antiquity alone should be a sufficient reason in the minds of the people for not welcoming new ideas from the outside. Mexico, it must be remembered, had the printing press a full century before the United States, and there are many other matters connected with civilization in which the Mexicans can claim

priority over any other people in North America. The readers of Mr. Winter's book will be better prepared, in case of dealing with Mexico, to understand any reluctance which the people there may have to adopting as a matter of course whatever ideas or customs the newcomer may seek to introduce in order to make himself "feel at home." The numerous pictures in this book have been superbly reproduced from excellent photographs taken by the author and a traveling companion.

THE director in chief of the New York botanical gardens, Dr. N. L. Britton, while on a recent visit to the experimental station maintained in Jamaica by this institution, obtained a good specimen of rubber from the vine *Forsteronia floribunda*, a plant referred to in this journal in the issue for June 1, 1907 (page 274). Dr. Britton informs THE INDIA RUBBER WORLD: "Rubber is extracted from this vine by the negroes in small quantities, but what they get seems to be of great elasticity. The vine is native in rocky limestone woods and thickets, growing one in a place, so that the total amount of it cannot be anything very great; cultural experiments by the Jamaica botanists have not been very promising, but it is possible that some results might be had out of it."



HUBERT L. TERRY, F. I. C.

[Author of "India-Rubber and Its Manufacture."]

The Coming Rubber Exhibition.

THE International Rubber and Allied Trades Exhibition to be held in London in September next is designed to direct public attention to the enormous advances made during recent years in the rubber industry and also in the methods of producing and making available the raw rubber used by manufacturers, and to bring these two important interests into closer touch. The brilliant success of the Ceylon Rubber Exhibition in 1906, though that was practically a local enterprise and confined to the rubber planting interest in a small part of the world, led to repeated suggestions that another rubber exhibition be held on broader lines and in a location more readily accessible to the bulk of those interested in rubber. These suggestions have crystallized in the forming of a committee composed of manufacturers, merchants, planters, botanists, chemists, and others with a view to holding the proposed exhibition in London. The original small committee has grown until it is not only representative of all the various interests above alluded to, but is also truly international. The "advisory committee" embraces names of persons of standing in every country in Europe, in the various colonial possessions of England and the continental countries in which rubber is produced, in Brazil and other South American countries, Mexico, Hawaii, and the Philippines. At this time plans are making for the proper representation of American rubber interests on the committee.

It is proposed that the department devoted to plantation rubber shall illustrate methods of tapping, coagulating, and drying rubber, with exhibits of utensils and machinery for such purposes, and that there shall be very full exhibits of rubber from different species, prepared by various methods. It is intended also that there shall be also exhibits of wild or native rubbers from Brazil, Africa, and other producing countries. Gutta-percha, balata, and the kindred gums are to have attention no less than rubber.

The manufacturers' section is to embrace goods made wholly or partly of india-rubber, gutta-percha, and so on, together with the raw materials other than rubber used in this industry—compounding ingredients, textile fabrics, and the like. In this department also spaces have been allotted for machinery and utensils used in the rubber industry. A final department will relate to rubber literature, including maps of rubber regions, and photographs illustrative of the various rubber interests.

The organizers are making arrangements for the delivery of illustrated lectures and addresses on rubber and its uses and cognate subjects, and no pains is being spared to provide a program which by its development shall tend to bring nearer together the producers

of rubber as raw material and the consumers of rubber in the manufacture. It is believed that it will be helpful to large users of rubber to become as fully acquainted as possible with all of the grades of the raw material available and to become familiar with methods employed in its production, and that on the other hand it will be of advantage to rubber growers and exploiters to learn what are the wants of factory managers in order to be able to the fullest extent to supply these.

The exhibition is to be held in Olympia, the largest building in London for exhibition purposes, and which has been used for several automobile shows. Originally the use of a smaller building was proposed, but the requests for space were on such a scale that its use became impracticable and Olympia has been secured. It is planned to open the exhibition on Monday, September 14, and to keep it open until Saturday evening, September 26.

In Ceylon the planters' association and chamber of commerce of Colombo have appointed a joint committee to organize an exhibit from that colony, with the aid of a grant from the colonial government. Space has been obtained at Olympia, and the work of organizing the exhibit is proceeding actively. Exhibits will be contributed by the different districts collectively, though individual exhibits will be allowed.

The government of the Federated Malay States and the Planters' Association of Malaya also are taking an active interest, and are preparing an exhibit with which will be combined that from the Straits Settlements.

The Dutch government have appointed a commission to represent Holland and her colonies extensively at the rubber exhibition, though the extensive plantations of rubber which have been formed in Java and Sumatra have not yet reached a productive age.

The Rubber Planters' Association of Mexico at its last annual meeting, as already reported in these columns, appointed a committee to arrange for a collective exhibit from that republic, and the committee has since been active in carrying out the work.

It is announced that Brazil will be represented by many separate exhibits, and probably by a general exhibit supported by the government. The British West Indies will be officially represented, as well as several parts of British Africa and also Portuguese East Africa. An official exhibit is booked from Hawaii.

The presidency of the exhibition has been accepted by Sir Henry Arthur Blake, K. C. M. G., late governor of Ceylon and president of the successful Ceylon rubber exhibition held in September, 1906, during his term of office in that colony. Several persons prominent in the rubber world have been named as vice presidents.



SIR HENRY ARTHUR BLAKE, K. C. M. G.

[President of the International Rubber Exhibition]



WHERE THE RUBBER EXHIBITION WILL BE HELD.

Some Native Sources of Rubber.

RUBBER YIELDING VINES IN COLOMBIA.

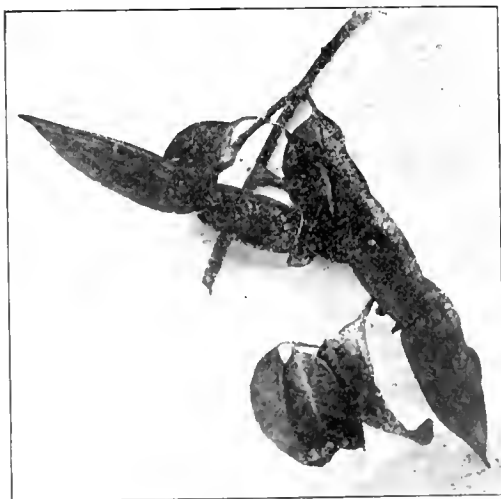
COLOMBIA at one time ranked among the first of rubber producing countries. The native rubber supplies accessible from the coast line were speedily exhausted, however, and the business of gathering rubber was transferred to other countries, having better means of interior communication. Without doubt Colombia is still rich in



"CAUCHO OREJA DE MULA."

[The "mule's ear" rubber plant of Colombia—showing the pairs of leaves so shaped to suggest a mule's ears, and the flower.]

rubber, however, and measures are developing in various parts of this extensive republic for increasing the output of this valuable material. Not the least interesting feature of the Colombian situation is the great number of tree species yielding rubber of value—including *Hevea*, *Sapium*, *Castilloa*.



"CAUCHO OREJA DE MULA."

[The "mule's ear" rubber plant of Colombia—showing two pairs of seed pods.]

Doubtless there are also several vines or creepers from which rubber might be obtained in paying quantities; indeed, information is being gained already in regard to such plants. General Diego A. De Castro, while governor of the department of the Atlantico, noticed a vine in his *hacienda* that,

on being cut, yielded a rubber latex. He cut several sections and drained them into a cup and the latex soon coagulated, giving a high percentage of a light colored rubber of very good quality. He then had the vine transplanted to the *patio* of his beautiful home in Barranquilla, and found it to be a quick growing plant, sprouting from either root or seed, and yielding rubber in from a year to 18 months in such quantities as to promise commercial results when handled on a large enough scale. General De Castro hopes soon to have a considerable number of seeds for distribution. The plant referred to, and called by the natives the "mule's ear," by reason of the shape of its leaves and seed pods, is illustrated on this page. Don Diego is described by a correspondent of THE INDIA RUBBER WORLD as "one of those who not only pray for Colombia's prosperity, but work for it a good deal harder than they pray. He is one of President Reyes's right hand men."

Another distinguished citizen of Colombia who takes a live interest in the development of the country is Don Jesus del Corral, of Bogotá, who recently discovered on one of his *haciendas* in the interior, a vine, believed to be different from the one just described, which he states to be a liberal yielder of rubber and easy of propagation. It is found at altitudes of less than 2,000 feet. He is planting it on a scale that will permit of a fair test of its commercial value. "Don Jesus," says THE INDIA RUBBER WORLD's correspondent, "is one of the aristocrats of Colombia, with many *haciendas* and mines. He spends some of his time in Bogotá, writing articles for the press that make people sit up and take notice. When he tires of telling people he goes to the *haciendas* and shows them. He has to his credit the discovery of a plant that has proved of great value to medical science."

DEVELOPMENT IN BRITISH GUIANA.

THE British Guiana Rubber Corporation, Limited, has been mentioned already in THE INDIA RUBBER WORLD [August 1, 1907—page 337—and subsequently], but until now its development has been retarded by legal proceedings arising in the colony, by reason of which a license for the company to do business was refused by the authorities. These troubles having been overcome, the company have issued a new prospectus. They announce the acquisition of additional licenses from the British Guiana government to collect rubber and balata, so that the area now within their scope is very extensive. From October 1, 1907, to February 18, 1908, it is stated that the company shipped 12,044 pounds of rubber and balata, some of the rubber (*Hevea*) selling in London at 3s. 6d. [=85½ cents]. They are collecting forest produce now, but purpose to plant rubber extensively. Registered offices, 77 King William street, E. C., London.

CAPTAIN BOYNTON NOT GOING TO HUNT RUBBER.

WHAT was extensively advertised as a scientific expedition for exploring the southern watershed of the Amazon, under the leadership of Captain George Melville Boynton, of Boston, and which was promised to promote studies for the special benefit of the rubber trade, appears to have been abandoned. The last news of Captain Boynton, under date of May 5, related to his being sentenced to prison in New York for three months on a charge of defrauding a hotel.

GUATEMALA.

EXPORTS of crude rubber in 1905 amounted to 368,046 kilos [=809,701 pounds], and in 1906 to 388,106 kilos [=853,833 pounds]. In the latter year 76 per cent. of the exports went to Germany, 12½ per cent. to the United States, and the remainder to other countries.

The Progress of Rubber Culture.

PROFITS OF THE ANGLO-MALAY COMPANY.

THE business reports of the Eastern rubber plantation companies which have reached the stage of paying dividends are filled with so much detail as to render them much more informing than is true of public companies as a rule. We have devoted space already to some of the details of the Vallambrosa estate reports, and now are in a position to give some figures of interest regarding The Anglo-Malay Rubber Co., Limited, also in the Federated Malay States. By the way, in the absence of views of the latter company's properties, there is introduced here a typical view of a plantation of Para rubber (*Hevea*) owned by the Vallambrosa company, with the idea that one such plantation is very similar in appearance to another.

The Anglo-Malay company collected in 1907 from 68,230 trees 224,778 pounds of rubber, or an average of 3.29 pounds per tree, for which the average price realized was just over 35. 9d. [=91.2 cents], after deduction of all freight and selling charges. The dividends for the year, at the rate of 20 per cent., amounted to £24,825 [= \$120,810.80], or about 53½ cents for each pound of rubber handled, although the average price realized was 20 cents a pound less than in the year before.

On the company's principal estate, "Terentang," 28,043 trees, in their eighth year, yielded 105,655 pounds of rubber, or an average of 3.76 pounds per tree. During the preceding fourteen months the average yield of these trees was about 1.68 pounds. In other words, the rate of yield was more than doubled during the year. The cost of tapping and curing on Terentang estate averaged about 13½ cents per pound, taking the whole year into consideration. During the last half of the year, however, the cost was just over 12½ cents. The rubber thus appears to have netted nearly 80 cents a pound, since the report would indicate that the Terentang estate product realized about 92.4 cents.

The company's income is charged with the upkeep of a large acreage of rubber not yet old enough to tap, and the cost of last year's new planting, so that the dividends by no means represent the entire profit of rubber production for the year. The expenditures during the year for upkeep, new development, buildings, machinery, etc., totalled \$87,893.85. Presumably much of this will not have to be repeated, while the trees tapped last year are expected to yield considerably more in 1908. Besides, there are yet nearly half a million trees to come into bearing. All of which would seem to point to comfortable dividends on Anglo-Malay shares, even if rubber should fall even below present prices. There were recent transactions in the company's fully paid shares at 3½ times their par value.

OTHER FIGURES OF YIELD AND COST.

THE Seremban Estate Rubber Co., Limited, in the Malay States, collected last year 109,055 pounds of rubber, against 62,258 pounds in 1906. The cost of the rubber and laying it down at

Colombo averaged a fraction less than 38 cents, whereas in 1906 it was 52¼ cents—a notable decrease. The year's working netted 39 per cent. on the capital, and dividends amounting to 33 per cent. were paid, against 24 per cent. in 1906 and 5 per cent. in 1905.

At the third annual meeting of the Batu Caves Rubber Co., Limited (London, April 24), the chairman, Mr. H. K. Rutherford, said that even if the price of rubber should fall to 1 shilling 10 pence [=44.6 cents] per pound, this estate would appear to be capable of yielding a profit equal to 30 per cent. on the capital.

A planter in Perak writes to the *Tropical Agriculturist* of the discovery on his place of 70 planted *Hevea* rubber trees, of which he has no history, and which were never tapped until last October. In February he reported that they had yielded over 700 pounds of fine rubber and 50 pounds of scrap, and were still being tapped, with no indication that the trees were being injured in any way.

PLANTING INTERESTS IN MEXICO.

At the last session of the Rubber Planters' Association of Mexico in February last, it was resolved to hold the next meeting somewhere on the isthmus of Tehuantepec during the coming summer, to arrange for which a committee was appointed, consisting of James C. Harvey, A. B. Coate, L. A. Ostien, V. O. Peterson, and W. C. Gruels. A program is being arranged for such meeting for the latter part of July, at Rincon Antonio on the National Tehuantepec railway. It has been proposed that a Mexican rubber exhibition be held in connection with this meeting, at which can be shown the exhibits which are being prepared for the International Rubber and Allied Trades Exhibition at Olympia, London, in September.

A new corporation has been formed under the name Hacienda Del Corte, Incorporated, to acquire and conduct the rubber and coffee plantation "Del Corte" in the state of Oaxaca, Mexico, succeeding the Isthmus Plantation Association of Mexico, with headquarters at Milwaukee, Wisconsin. The planting of rubber began in June, 1901, and has been continued year by year, until there are more than 1,000,000 trees standing. The plantation was developed under contract and was held in trust while the subscribers to the plan were paying for shares in installments. The development work having been completed, the shareholders have assumed direct ownership, with a new company name as above indicated. The officers are Walter Kempster, president; William De Steese, vice president; William H. White, secretary; and Charles B. Weil, treasurer. The headquarters remain at Milwaukee.

There must be many thousands of rubber trees in Mexico today, 7 to 10 years old, on plantations on which no tapping has yet been done, and on which experimental work will be done this year. Some very interesting results may be expected in the very near future.



CULTIVATED "HEVEA" RUBBER.
[Vallambrosa Estate, near Klang, Federated Malay States.]



LABORATORY FOR COAGULATING RUBBER.

[On the "Hacienda Del Corte," in Oaxaca, Mexico; photographed while in course of erection.]

RUBBER RESULTS IN MEXICO.

IN a report to the stockholders in the Mexican Mutual Planters Co. (Chicago), owners of "La Junta" plantation, in Mexico, the president, George C. Sanborn, under date of April 27, 1908, writes that during January and February last some experimental tapping was done on 6½ year old *Castilloa* rubber trees, to test certain points, and that 1400 pounds of dry rubber were obtained, at a cost of about 25 cents per pound. Mr. James C. Harvey, the plantation manager, on his neighboring private plantation, it is stated, tapped some 7½ year old trees, gaining 1000 pounds of rubber, at a cost of 23 cents a pound. The experiments are considered as having resulted favorably, but commercial tapping is not planned before the trees are 8 years old. As the trees advance in age and increase in productiveness, Mr. Sanborn thinks that the cost of gathering rubber will drop at least to 12 or 15 cents a pound.

The 1908 report on the plantation of the Ohio Rubber Culture Co. near Manatitlan, Mexico, was written by Charles S. Eddy, of Akron, Ohio, chosen by the shareholders to visit the property. Their plantation is not yet old enough to yield rubber, but Mr. Eddy wrote that he visited two private plantations near Tuxtepec, which are yielding satisfactorily. These are not named in the report but Mr. Eddy informs THE INDIA RUBBER WORLD that one property is the sugar and coffee plantation of Señor Don Joaquin Jimenez, referred to in this journal [August 1, 1902—page 84—and subsequent—] as having on it some thousands of rubber trees, planted originally



CURING RUBBER ON BANANA LEAVES

[A method employed formerly on La Zacualpa plantation, in Mexico.]

for coffee shade. The other property, three miles from Tierra Blanca, Mr. Eddy mentions in his printed report as having 7 and 8 year old rubber trees, which were being tapped lightly but yielding at a rate which netted \$1200 a month. This property is owned by F. A. Hardy (president of The Diamond Rubber Co.), R. Cluke, and R. S. Willis, of Chicago, the latter being manager. Mr. Eddy states that he understands the \$1200 to mean gold.

On the property of The Tolosa Rubber Co. in Oaxaca, Mexico, Mr. W. L. Wadleigh in February tapped 50 *Castilloa* trees, 5 years and 8 months from planting, and averaging 18.7 inches in girth. The yield from the one tapping was 71 ounces of rubber, or nearly 1½ ounce per tree. Five diagonal cuts were made in each tree and the latex coagulated in the cuts.

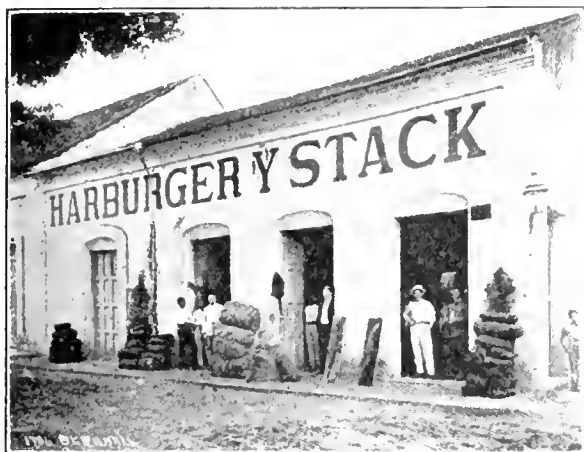
An illustration on next page is reproduced from a publication by the Nanchital Plantation Co. (Chicago). The booklet says: "The illustration is from a firm doing business in San Juan Bau-



GROUP OF RUBBER TAPERS ON LA ZACUALPA PLANTATION.

[Photographed November, 1907.]

tista, Chiapas, who claim to buy and sell nothing but cultivated rubber, their purchases and sales averaging about 10,000 pounds



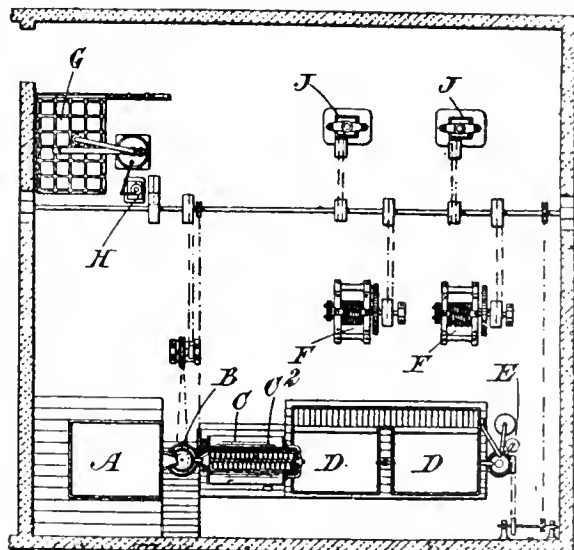
DEALERS IN MEXICAN CULTIVATED RUBBER.

[Store in San Juan Bautista, Mexico, of Harburger & Stack, New York Merchants.]

per month - - a matured tree yielding from 1 to 4 pounds of crude rubber per tree. Their business increases with the increase of matured rubber trees."

NEW APPARATUS FOR PREPARING RUBBER.

THAT the great rubber plantations in Mexico are soon to be producing rubber on a large scale is growing more and more evident. Perhaps nothing points to this more definitely than the production of practical tools and receptacles for tapping and gathering and the designing of plants for straining, coagulating and preparing rubber for market. An illustration herewith shows the ground floor of a preparing plant patented by Leslie Radclyffe and Dr. Pehr Olsson-Seffer. In brief, this covers a



APPARATUS FOR TREATING "CASTILLOA" RUBBER.

[KEY.—A. Receiving Tank for Latex. B. Centrifugal Strainer. C. Steam Jacketed Coagulating Tank. C². Centrifugal Screw Conveyor. D. D. Settling Tank. E. Mother-liquor Separator. F. F. Ordinary two-roll Washer. H. Vacuum Pump. G. Vacuum Chamber. J. J. Block Press.

receiving tank for latex, a centrifugal strainer, a steam jacketed coagulating tank containing a screw conveyor, a settling tank, and second centrifugal separator, washing rolls, vacuum drier and block presses. The inventors speak of mixing the latex in its primary stage with formalin, or other preservatives, and with an equal volume of water. The centrifugal strainer is lined with muslin, canvas, or perforated metal, and after passing through

it the strained latex is raised to a temperature not exceeding 115° F., and a small quantity of preservative such as an alcoholic solution of creosote, salicylic acid, or carbolic acid is added. From the coagulating tank the partially coagulated latex is passed into settling vats, and allowed to stand for two hours, when the mother liquor is drawn off from the bottom into a separator, and the coagulated latex is washed in the same tank by a stream of water which is forced upward from the bottom. A conveying belt then carries the coagulated rubber to a washing machine, where it is run in strips which are placed in a vacuum drier, partially dried, and then put into the press and forced into blocks.

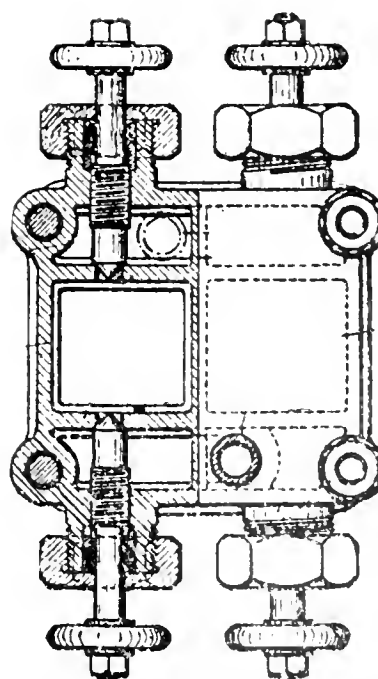
In actual practice it is altogether probable that this process will be somewhat simplified, although much of the arrangement is excellent—for example, the arrangement whereby the latex from the first tank (A) goes by gravity through the strainer, the settling tanks and the centrifugal.

With half a dozen such plants at work on the great plantations in Mexico, the minor discrepancies will correct themselves, and it will be along some such lines as this that the problem of handling latex in quantity will be solved.

PROGRESS ON PLANTATION "RUBIO."

THE investors in the Tehuantepec Rubber Culture Co. chose for the last annual inspection of Plantation "Rubio" Captain Charles A. Benham, who visited the property on the isthmus of Tehuantepec in February. His report, which has now appeared in pamphlet form, gives details of interest regarding the progress of the company's growing rubber (*Castilloa*), with figures comparing present conditions with those noted by earlier inspectors. On the whole, the plantation seems to maintain the high standard of condition which has marked it from the beginning. A number of good photographic views are included. Incidentally, it is stated that extensive operations in oil have been started by S. Pearson & Son, Limited, the English engineering firm, in the neighborhood of Plantation Rubio, and it is probable that in the near future the rubber company will derive considerable benefit.

A NEW TUBING MACHINE.



VALVE MECHANISM USED WITH BER- in process of being
TRAM'S TUBING MACHINE. "spewed."

THE firm of Bertram's, Limited (Edinburgh, Scotland), manufacturers of rubber machinery, have patented an improvement to tubing machines which, aside from the slight change in the form of the screw and the cylinder, centers chiefly about the cored portions of the cylinder head. This is so arranged that the parts close to the die by means of hollow chambers and quadruplex valves may be heated or cooled more effectively than at present. A study of the patent would seem to indicate that it is designed to do away with the gas flame often used below the die to make the tubing flow more easily, particularly when refractory stocks are

The Late Theodore E. Studley.

IN the life of Theodore Earle Studley, who passed away on April 30, was epitomized to an unusual degree the history of the rubber business, and he had contributed not only to its material success in many ways, but to the upbuilding and maintenance of the high standards of character and integrity which are admitted to characterize this branch of trade.

Mr. Studley was born in Worcester, Massachusetts, March 20, 1831, and after attending the schools of his native town entered the retail shoe store there of Olney Fenner Thompson. The latter later became employed by the New Brunswick Rubber Co., in New York, whither he was followed by Mr. Studley, who entered the employment of the same company on March 10, 1850. That was already an important concern in the rubber shoe trade, under its original president, Johnson Letson. At the date named the New York store (No. 100 Liberty street) occupied a site which is now in the middle of Church street. Their New York business was not confined to foot-wear but embraced a general line of rubber goods, and the house was considered the most important one in that branch.

In 1857 the New Brunswick company decided to confine itself to manufacturing, when its general business was taken over by Henry G. Norton, who had been in charge of the selling department. In 1858 Mr. Studley became a partner in the house, under the style H. G. Norton & Co., and in time they became the most important distributing house in the country for rubber goods. They were at one time sole distributors of the products of the New York Rubber Co., and a large percentage of the output of the India Rubber Comb Co., the Novelty Rubber Co., the Goodyear Glove company, and several other factories. When the National Rubber Co. (now the National India Rubber Co.) was formed, Norton & Co. became the general selling agents. At one time Augustus O. Bourn, now of the Bourn Rubber Co., was a partner in H. G. Norton & Co. Mr. Henry C. Norton, now of the Pacific Rubber Co. (San Francisco), was a nephew of Henry G., and began his business career in his uncle's house. But a list of the firm's connections in and out of New York, and of its "graduates," is too long to repeat here.

In 1872 Mr. Norton retired, on account of declining health, and the general business of the firm was sold to the Rubber Clothing Co., which at the same time took on also the name Goodyear Rubber Co. This change involved, for instance, the introduction of the Goodyear Rubber Co. into St. Louis and elsewhere in the West. The druggists' sundries department of the house, however, was continued by Mr. Studley, with a partner, until January 1, 1877, when he took charge of the downtown branch of the Goodyear Rubber Co., which was maintained until August, 1890. He then devoted himself to another line of business until June, 1898, when he became treasurer and secretary of the Goodyear Vulcanite Co., a house long established in the world rubber trade, under the presidency of Myer Dittenhoelter (who had been in the business since 1857) and three years later reincorporated as the Vulcanized Rubber Co. This position

Mr. Studley held until the end of his life. He was at the offices of the company as usual until the Saturday afternoon preceeding his death. On Monday he telephoned word that he was feeling indisposed, and on Thursday, at 3.30 p. m. the end came, due to an attack of pneumonia, accelerated by weakness of the heart.

Theodore E. Studley had been a member of the New England Society in New York from December, 1858—almost 50 years. He had long been a member of the Arkwright Club, of which he became one of the governors in 1902, and for a number of years had been in the habit of lunching on alternate days at the Arkwright and Hardware clubs. He was a member also of the New York Athletic, Twilight, and Round Table clubs.

Funeral services were held on the afternoon of May 2, at the late residence of Mr. Studley, No. 162 West Seventy-seventh street, New York, the ritual of the Episcopal church being observed. The interment was at Greenwood cemetery. Mr. Stud-

ley, who had been a widower since December last, is survived by a daughter, Mrs. Robert A. Fielding, of New York.

A very charming personality had Mr. Studley. Keen, alert, intellectually vigorous up to the day of his death, possessed of a fund of humor and of anecdote that was always fresh and kindly, he numbered his friends by the hundreds. No one ever saw him depressed or pessimistic. His work was always done, and he accomplished much, and he always had abundant time for social converse, and on the street, in his office, at his home, was ever the same quiet, courteous, hospitable gentleman.

Mr. Studley had two brothers who were engaged in the rubber trade—Colonel John M. and Thomas Earle—both of whom he survived. In 1865 they bought an interest in a firm in Providence, an outgrowth of the earliest Bourn firm, and pioneers in an important

way in the druggists' sundries manufacture, which from the date mentioned became A. C. Eddy & Studleys. After 1883 until 1894 the firm was Studley Brothers, and then the business passed into other hands.

NOT SUCCESSFUL IN THE ACRE.

A PETITION for the winding up of the De Mello Brazilian Rubber Co., Limited, presented by S. Lehmann, of Paris, a judgment creditor, was to be heard before Mr. Justice Neville, in London, on April 14. The company was formed in July, 1906, to acquire the going rubber estate of S. F. De Mello, in the Acre district. Share capital to the amount of £465,300 was issued. Large operations were reported for the first year, and sales of rubber reported amounting to £251,560. The reports submitted at the annual meeting, in London, on December 13, 1907, were unsatisfactory, however. On the same date it was voted to provide more working capital by the issue of debentures to the extent of £150,000, to secure which a deed of trust covering all the company's property and contracts was executed March 4, 1908.



THEODORE EARLE STUDLEY.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

A SECTION of the American press appears to accept without reserve the claim made by some English papers that the result of the recent notable by-election in Manchester sounds the death knell of Free Trade. Those on the spot know that this is by no means the truth, and that if free trade had been

THE FISCAL QUESTION.

the principal issue before the electors instead of being relegated by the Unionist candidate to the back seat the result would probably have been very different. At the same time, the topic has come up for renewed discussion, and I have been asked how it is viewed in the rubber trade. My reply has been that unanimity of opinion does not prevail, and that we find partners in the same firm in opposing political camps. It certainly seems, however, looking at the more important Lancashire rubber works, that Tariff Reform has the greater number of adherents, especially among tire makers who are anxious to see some restriction put upon the free importation of French and German tires. Though not exactly apropos of this topic, but not altogether foreign to it, I may mention that an advertisement of the Continental Tire and Rubber Co. in a British trade journal came up recently as the subject of a question in parliament, Mr. Evelyn Cecil asking the president of the board of trade whether he was aware that the advertisement contained an illustration of a motor tire in conjunction with two British flags. The answer was to the effect that the department were considering whether an offence had not been committed under the merchandise act. Mr. Cecil, it may be mentioned, is member for Aston Manor, where the Dunlop company's works are situated, so that it is possible that he was not acting entirely on his own initiative.

A STATEMENT which has appeared in print that this company is being voluntarily wound up, and the creditors requested to

THE RADAX CO., LIMITED.

send particulars of their claims to the liquidator, has given rise in some quarters to a misapprehension of the position of the company. I may point out that the winding up is merely for the purpose of capital rearrangement so as to more fully protect the interests of those who have become associated with the business of late. The sole license for the manufacture is now in the hands of the British Insulated and Helsby Cables, Limited, at whose Helsby works the manufacture and trials have for some time been carried on by Mr. L. Johnstone, B. Sc., who has been associated with the Radax cycle and motor tire since business was first commenced at Blackley, near Manchester. The cycle tire has been abandoned, but from persons who have had the Radax motor tire fitted to their cars I gather that it has proved in every way satisfactory.

THE appointment of a treasury committee to inquire into the work of this comparatively new institution was the direct

THE NATIONAL PHYSICAL LABORATORY.

outcome of the strong protests made by professional bodies such as the Institute of Chemistry that the laboratory was going outside the charter of its foundation and competing in analytical and ordinary routine testing work with professional men who had not the advantage of being backed by public funds. To my mind the protests were amply justified, and the report of the committee, though it will not be considered entirely satisfactory by professional men, must assuredly lead to the laboratory confining itself more closely to the purposes for which it was founded and endowed, viz.: the standardization and verification of scientific instruments. The evidence given by Mr. R. K. Gray, of the Silvertown rubber company, is interesting, as it was not generally known that Dr. W. A. Caspari's researches at the laboratory on gutta-percha and balata were carried out at the

instigation of the Silvertown company. The work was paid for to some extent, at any rate, by the firm, and the results were eventually published for the public benefit. But it is easy to see that cases might arise where if a firm paid for an investigation they might object to its publication for the benefit of others. Complications are bound to arise if work of investigation for private firms is carried on under the laboratory's present charter. Mr. Gray expressed himself in favor of the scope of the laboratory being widened so as to include ordinary routine testing, which is of course absolutely outside the objects of its foundation, and strenuous opposition is certain to be made to any application of public funds to this end.

ADVERTISEMENTS in THE INDIA RUBBER WORLD and some recent correspondence have directed my attention to this product,

ELATERITE.

which in England is known chiefly as an interesting mineralogical specimen, and is rarely to be met with except in mineral collections. Its principal place of occurrence in England is in Derbyshire, where, especially in old lead mines, it has been known, though it does not appear to have ever been mined and utilized as is the case in the United States. Chemically it is merely a variant of the more liquid bitumen, which is by no means uncommon in limestone strata, considerable variation being shown in the elasticity of samples obtained from different districts. A letter to THE INDIA RUBBER WORLD of March 1 says that elaterite is the only hydrocarbon "capable of being treated by a process of destructive distillation prior to being subjected to the action of solvents or mechanically fluxed with any other material." There appears to me a general vagueness about this sentence. I do not agree that elaterite is the only hydrocarbon which can be destructively distilled, but the statement quoted may only apply to some particular process, which is not specified. With regard to the expression "mechanically fluxed" would it not be more correct to say "mixed," or "chemically fluxed," whichever it may happen to be? But scientific details apart, it is decidedly interesting to hear of a use on the large scale for elaterite; this and other bitumen products seem to be more highly in favor in American rubber works than in those of Great Britain, though to judge by the attention which Weber and others gave to the methods for estimating pitch in rubber goods a layman might have thought that it was a common compound of rubber goods. Stearine pitch has of course had a large application under the name of bitite as a cable insulating material, but this has been apart from the rubber goods manufacture.

THERE is nothing of particular novelty to report in this branch, though the firms making the different products seem to be making

LEATHER SUBSTITUTE BUSINESS.

good progress. This observation will not perhaps be endorsed by the shareholders in New Pegamoid, Limited, as the last report was not particularly satisfactory. The upholstering of motor cars has brought a welcome accession of business to firms in this branch, and I understand that a large part of the output of Velvrl is used in this connection. It has not, I believe, been previously mentioned in this paper that the Velvrl Co., with which the name of Mr. Walter F. Reid has been associated from the first as patentee and shareholder, is now amalgamated with another concern making an analogous article, the firm now being known as The Velvrl-Bonnaud Co., Limited, of Norfolk road, Ponders End, London. This company own all the Velvrl patent rights except that for the manufacture of belting, which was sold some years ago to the Gandy Belt Manufacturing Co., of Seacombe, Cheshire. As velvrl

consists essentially of a skeleton of nitro cellulose built up with nitrated castor oil, its composition is unchangeable, and I have seen samples such as the covers of pocket books ten years old and apparently as good as new. It is said, though I do not vouch for the accuracy of the statement, that similar goods consisting mainly of oxidized linseed oil do not exhibit anything like the same wearing power owing to a liability to undergo further chemical change. With regard to the leather substitutes of the purely nitrated cellulose or collodion variety it was thought at first that their manufacture and use would be attended with danger from explosion. Although this does not seem to have been the case, there is always the associated danger that the evaporation of the camphor converts a non explosive nitro compound into a body which is practically identical with gun cotton.

THE London Synthetic Rubber Co. claim to have made decided progress in the way of turning out the material indicated by their title. I have not seen any of the

SYNTHETIC RUBBER.

product personally, but a friend of mine, who, by the way, knows nothing about rubber, tells me that he has seen a sample, and that it was strong and elastic. It appears that the price of production has so far been too high for business purposes, and that it is recognized that production at a shilling per pound will be necessary for its successful exploitation. A considerable reduction, I am assured, has been effected already, though they are still some way off the shilling cost desired. Meanwhile it is stated that the £100 shares, with £10 paid up, are quoted at £400 each. From another source I gather that Peru is going to knock all other rubbers, natural or synthetic, out of the market when the arrangements now in hand in the upper Amazon valley for the facilitation of freight and the augmentation of labor come to maturity. No date, however, appears to have been fixed for this development. Clearly, if one believes everything he hears, the rubber plantation people may not have everything their own way, after all.

THE "TUNO" GUM SITUATION.

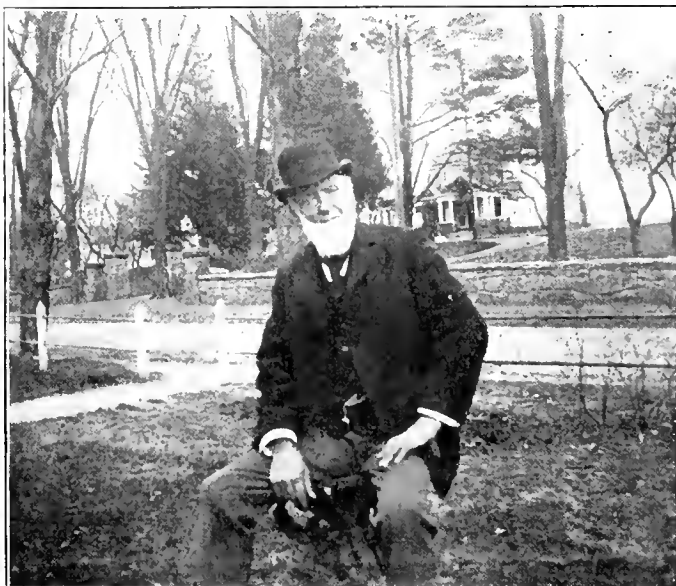
A CONTRACT has been entered into between the government of Nicaragua and R. J. La Villebeuvre, a resident of Managua, giving the latter the exclusive privilege for 20 years of gathering gum from the tree known as "tuna" or "tuno," in the national forests, over the greater portion of the republic. The government is to receive 2 cents (gold) for each kilogram [=about \$20 per ton] of gum extracted, however it may be disposed of. The tree referred to is particularly abundant in the district of Cabo Gracias à Dios. It is similar in appearance to the native rubber tree (*Castilloa elastica*) and the product resembles crude rubber, except that it is altogether lacking in resiliency. The United States consul at San Juan del Norte says that while considerable money has been spent in experimenting with the tuno gum in the locality referred to, it has been without practical results hitherto. Shipments have been made from that port from time to time since 1885, but at no time in excess of 5,000 pounds in one year, while prices have fluctuated between 7 and 25 cents per pound. The fact that this concession was sought for and has been granted would indicate that some field of usefulness had finally been discovered for tuno gum.

There is now left no forest rubber in Nicaragua of any kind not subject to some private monopoly. Some details under this head appeared in THE INDIA RUBBER WORLD, March 1, 1928.

A crude rubber importer in New York advises THE INDIA RUBBER WORLD that he is ready to execute orders for tuno gum upon two weeks' notice, and that business was done in this gum during the past month, at about 14 cents a pound. He says that the gum has been in some demand, for friction work, but that a twofold trouble existed—uncertainty in delivery and no fixed standard of quality. Otherwise, he thinks that considerable "tuno" might be taken.

THE OLDEST RUBBER WORKER.

PROBABLY the oldest man at work to-day in a rubber factory is Frank De Frate, who still makes water beds at the Hodgman Rubber Co.'s factories in Tuckahoe, New York. Mr. De Frate, who, by the way, is a grand uncle of the present generation of Hodgmans, has been connected with the company from the time when Daniel Hodgman first began business, 70 years ago, on Broadway, and has followed the Hodgman fortunes ever since. From the factory on Duane street to Lexington avenue and Thirty-third street, and from there to Twenty-sixth street and East river, and then when Daniel Hodgman bought the cotton mill building at Tuckahoe in 1851, and incidentally most of the surrounding country, Mr. De Frate was his right hand man. In those days he was, according to tradition, stronger than any two other men in the factory, and able to do the work of five. He was more or less of a fiery individual, but



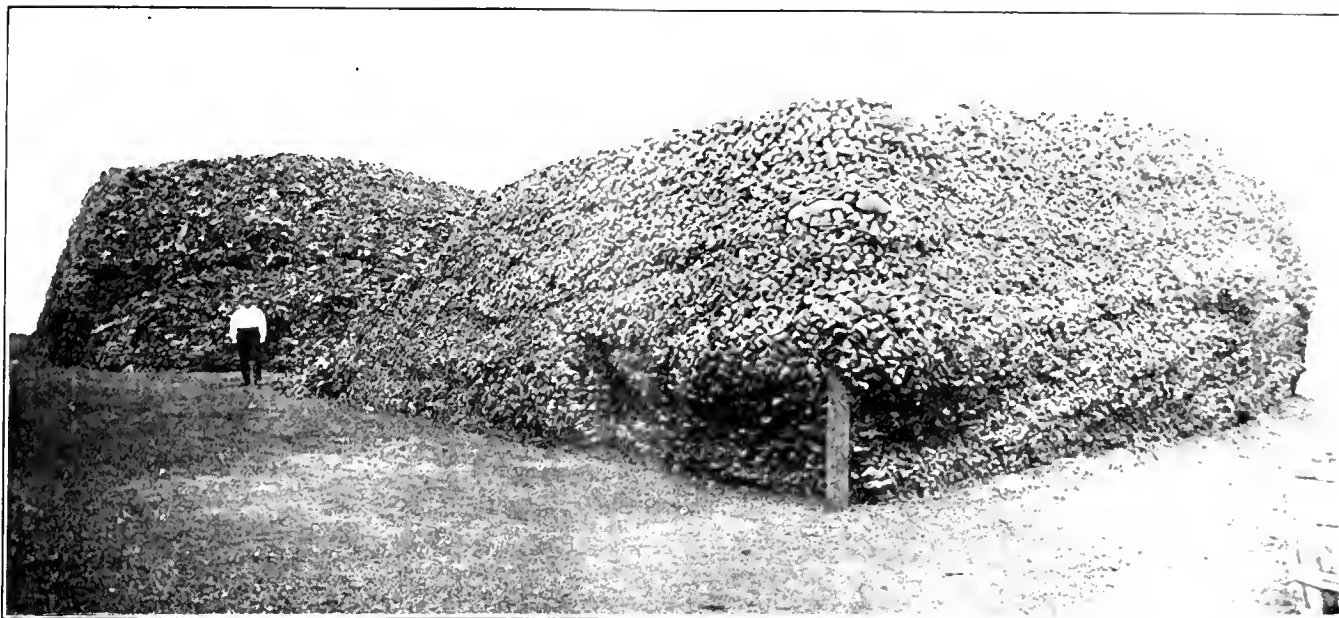
FRANK DE FRATE.

[Employed by The Hodgman Rubber Co. since their beginning, and still at work, at 84 years.]

only broke away from the place in which he was tremendously interested on two occasions. Once he went to work for Horace H. Day and remained there just one day. Another time he actually got as far as Ohio, where he furnished a house for himself and had begun to feel at home when Daniel Hodgman dropped in on him, told him he had got to come back as he needed him, and he promptly auctioned off his goods and returned.

At eighty-four, his present age, Mr. De Frate is still active, and his memory of the beginnings of the rubber trade is surprisingly accurate. He is wonderfully proud of the fact that he does his full day's work six days in the week, and although the management of the Hodgman factories have tried to pension him, they are absolutely unable to make him accept a cent that he does not earn, or to keep him away from the factories during working hours.

SINGAPORE appears to be developing a considerable market for automobiles, tires, and accessories, and the latest report is that an automobile journal is being established there. Mention has already been made in THE INDIA RUBBER WORLD of a tire manufacturing plant in Singapore, besides which the "Silvertown," "Continental," and some other leading brands of tires are actively advertised in that market. For example, the well known Harvey Frost vulcanizer, an English production, is being exploited by a well known Singapore commission house.



A STACK OF OLD RUBBER SHOES.

[This illustration represents 1000 tons (2,000,000 pounds) of old rubber shoes collected for reclaiming purposes. A mass three times this size would represent the old rubber shoes collected and now held in continental Europe, exclusive of Russia. A mass six times this size would represent

the amount collected and ready for shipment in Russia. A mass fifteen times this size would represent the amount now collected and unsold in the United States.]

WILL OLD RUBBER SHOES GO HIGHER?

ONLY a short seven months ago old rubber shoes, which are the basis of the reclaiming business, sold for 13¢ and even as high as 14 cents per pound. To-day they are selling at 7 cents, and a very interesting situation has resulted. In a word it is this: The thousands of small collectors throughout the country, believing that high prices will again rule, having collected hundreds of tons of shoes, are holding them hoping for a return to 13 cent prices. With every wish for the prosperity of this portion of the people interested in rubber reclaiming, THE INDIA RUBBER WORLD is not able to see any statistical basis for such an advance in price.

Of course, the whole situation must be governed by the law of supply and demand. A careful estimate of the amount of old shoes consumed by the twelve leading rubber reclaiming companies in the United States, shows that during the past six months they have used 15,000 tons less than for any like period during the past two years. This is due partly to the falling off in the business of general rubber manufacture, but fully as much to the remarkable drop in the price of crude rubber and to the very general introduction of guayule gum. When it is remembered that during the last year there was used 4,000 tons of guayule in American rubber mills, and that each pound displaced at least several pounds of reclaimed rubber, it will at once be evident that in many lines old shoes are not as necessary as they were.

The situation is therefore this: Here in the United States there are now at least 15,000 tons of old shoes held in small lots, with the collection going on at the usual rate. There are in continental Europe, outside of Russia, 3,000 tons that are liable to appear in the market at any time. Beyond this, as no shoes have come from Russia for some months past, there are 5,000 or 6,000 tons that will be thrown upon this market if a rise in price takes place, that is, if business for a year to come should become normal. (It will probably be 30 per cent. less than normal.) It would seem, therefore, with crude rubber lower than it has been for years, with guayule rubber displacing hundreds of tons of reclaimed rubber, with consumption less than normal, and with big stocks of shoes already collected, and collections going on

at the rate of 35,000 tons a year, that there is little hope of higher prices for old shoes.

THE GILBERT-BESAW PROCESS.

SO much of interest has developed in the trade concerning what is known as the Gilbert-Besaw reclaiming process that a brief description of what it is will be timely.

In the first place the process is not patented, but is secret. It is applicable to the recovery of any sort of rubber scrap, whether cured in open steam, in molds, or in dry heat. According to the statement of the inventors no acid, or alkali, or anything that can be in any way injurious is added. The reclaiming—that is, as far as cracking, grinding, and removing iron, brass, and sand. The machinery for treating the waste rubber for the removal of fiber and for devulcanization, however, is individual to the process. The time occupied in devulcanization is about one-quarter that used in existing processes. No residuum or oily matter of any sort is added to the product, either before or after devulcanization. The results of this process, for insulation purposes, in reducing the acetone test, is of itself invaluable.

The American rights are controlled by the New Jersey Rubber Co., at Lambertville, N. J., with the single exception of the Firestone Tire and Rubber Co., who have shop rights. Messrs. Gilbert and Besaw are planning soon to arrange with manufacturers abroad to take over the process.

THE cost of collecting chicle and laying it down at El Carmen, on the gulf coast, in the state of Campeche, Mexico, is stated in the *Boletín de la Asociación Financiera Internacional* at \$500 (Mexican) per metric ton, and the selling price at that port is about \$1,000 (Mexican) per ton. At current rates of exchange these figures work out at about 11 cents (gold) per pound for cost and 22 cents for the price realized. The *Boletín*, in reporting on some properties near El Carmen on which chicle trees are abundant, intimates that by exporting chicle directly to consuming markets the margin of profit might be increased considerably.

THE ELECTRICAL INDUSTRY.

BUSINESS OF THE GENERAL ELECTRIC CO.

THE sixteenth annual report of the General Electric Co. (Schenectady, New York) for the year ending January 31, 1908, shows: Goods billed to customers during the year, \$70,977,168; orders received, \$59,301,040; profits (after writing off \$3,745,080.06 for depreciation of plants), \$6,586,653.37; dividends paid, \$5,183,614; surplus at the end of the year, \$16,513,836.14. The capital stock issued to date is \$65,513,836.14. In the ten year period ended in January last, sales billed increased from \$12,396,093 to \$70,977,168, an average increase of 19.8 per cent. per year. Sales billed during 1907 increased 18.2 per cent. over the previous year. The gain was in the first half of the year, however, the general depression of business later affecting the company's operations materially. The number of employes declined from 28,000 to 20,000. The company have purchased land at Erie, Pennsylvania, for additional works, instead of increasing the establishment at Schenectady, deeming it wise to have facilities for production farther west. They will not build, however, until business improves. The report emphasizes the increase in the use of electrical apparatus for industrial purposes. [Last year's report in THE INDIA RUBBER WORLD, August 1, 1907—page 354.]

A GERMAN ELECTRICAL JUBILEE.

THE largest German electrical manufacturing company, the Allgemeine Elektrizitäts Gesellschaft (General Electric Co.), at Berlin, celebrated on April 20 the twenty-fifth anniversary of its founding. The business was begun in 1883 as the Edison-Gesellschaft with a capital of 5,000,000 marks [= \$1,190,000] primarily to introduce into Germany the Edison incandescent lighting system. The present name was adopted in 1887 and the scope of the company's work has extended until it covers the production of every class of electrical apparatus, including insulated wires and cables. The company have gradually absorbed other concerns in the same field, and in 1903 a community of interests was established with the General Electric Co. of America. The number of employes in Germany alone is 30,700. The factories in Berlin occupy 272,800 square meters [= 2,935,328 square feet] of space. Outside of Germany the company own several factories and maintain 40 agencies. The volume of sales increased from 1,213,000 marks in 1884 to 216,081,000 marks [= \$51,427,278] in 1907. The share capital is now 86,000,000 marks [= \$20,468,000].

ELECTRIC WIRING OF THE "MAURETANIA."

THE electrical equipment of the new British steamer *Mauretania*, the latest addition to the Cunard line, embraces over 200 miles of wires and cables. Power is transmitted from the generators by means of 48 cables, referred to as being of Henley's vulcanized rubber insulated type, covered with asbestos on account of their warm position. They are systematically placed on porcelain insulators and protected with steel plating in both engine and boiler spaces. Where passing through bulkheads and decks the cables are fitted in watertight glands with fiber packings. Rubber insulated wire in wood casing is employed beyond the auxiliary boards, with a view to facilitating alterations and extensions, and great pains has been taken to conceal the wiring.

THE COTTON SITUATION.

THE London *Economist* reports that cotton weaving in Great Britain was in a poor way at the beginning of the year, and matters have gone from bad to worse, particularly on account of the declining demand from India. It was estimated recently that 15 per cent. of the weaving machinery in Lancashire was idle, with 30,000 operatives unemployed. The exports of cotton

piece goods amounted to 1,508,120,600 yards for the first three months of this year against 1,639,018,700 yards for the first three months of 1906. The British exports of cotton yarn, however, for the first quarter of 1908 were larger—that is, 62,030,400 pounds, compared with 55,108,700 pounds for the first quarter of 1906. New mills are in erection to contain 4,000,000 spindles, and the *Economist* says it looks as if there will be too much yarn on the market for the looms.

* * *

At the recent West Indian Agricultural Conference, in Barbados, considerable attention was devoted to the increase in cotton culture in the West Indies. It is estimated that there are now more than 24,000 acres under cotton, of which 20,000 are planted to Sea Island cotton, which has proved very successful as to quality of the product and is becoming profitable. The West Indian export of cotton increased from 328,530 pounds in 1902 to 2,013,698 pounds in the first nine months of 1907, the value of lint and seed in the latter period reaching £186,510 [= \$907,650.92]. The opinion prevailed that the production of West Indian Sea Island cotton will yet prove of great importance to the cotton industry of England.

RUBBER INDUSTRY IN NEW JERSEY.

THE rubber industry in New Jersey is reported in considerable detail from time to time in the yearly reports of the bureau of statistics of labor and industries of that state, the latest of which covers the statistics for the calendar year 1906. For the purpose of illustrating the growth which has been made in the industry within a few years past it may be of interest to contrast the latest figures with those reported for the year 1899, as follows:

	1899.	1906.
Establishments reporting	33	38
Number of private firms.....	2	4
Number of partners.....	4	9
Number of corporations.....	31	34
Number of shareholders	356	4,937
Total capital employed	\$6,700,548	\$13,143,208
Value materials used	\$8,205,344	\$15,840,571
Value of goods made.....	\$12,441,006	\$22,824,737
Total wages paid	\$1,739,018	\$3,075,239
Average number employes.....	4034	6,280
Average yearly earnings	\$431.31	\$489.76
Average days operated	280.27	298.28
Proportion business to capacity.....	81.97%	84.34%

The establishments reported on above embrace manufacturers of hard rubber and soft rubber, and also rubber reclaimers, which are not, in the truest sense, rubber manufacturers. At the same time, it is to be inferred that they do not embrace certain concerns where rubber goods are not the most important product, though in the aggregate their rubber production is large. Such concerns, for example, would be the John A. Roebling's Sons Co. (Trenton), insulated wire manufacturers, and the Joseph Dixon Crucible Co. (Jersey City), pencil manufacturers. For various reasons it is practically impossible at any time, in any state, to ascertain accurately the statistics for any industry; there are difficulties in the matter of classification, disinclination on the part of manufacturers to supply figures (which are not forced to do), and so on.

The figures given above are of value, none the less, because the concerns referred to have reported year after year on blanks of the same character, and the table shows how their volume of trade has developed.

RUBBER substitutes figure for the first time in the work of the United States census in the report for 1905. According to Bulletin 92 of that census the production of such substitutes in this country amounted to 254,892 pounds, of the value of \$63,724, or an average of about 25 cents a pound.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED APRIL 7, 1908.

- N**O. 883,793. Tire for vehicle wheels [Solid; held in place by detachable flanges.] J. E. Tourtellotte, Hartford, Conn.
 883,814. Air brake hose coupling. J. E. La Rocque, N. mique, Quebec.
 883,941. Hose coupling. M. P. Eagan, Newport, R. I.
 884,159. Dental plate. E. A. Jackman, Hartington, Neb.
 884,187. Hose coupling. A. A. Minorsky, Wilkinsburg, Pa.
 884,294. Tire sealing device. G. H. Phillips, assignor of one-half to G. T. Soule, both of Plymouth, Mass.

Reissue.

- 12,777. Vehicle wheel rim. F. A. Seiberling, Akron, Ohio.

Trade Marks.

- 32,592. National India Rubber Co., Bristol, R. I. The representation of an electric cable. For insulated wires.
 32,951. Manufacturers' Supplies Co., Philadelphia. The word *Velvet*. For rubber tires.
 32,915. Corn Products Refining Co., New York city. The word *Royal*. For corn oil.

ISSUED APRIL 14, 1908.

- 884,456. Insulating compound. N. Booth, assignor to Banner Rock Products Co., all of Alexandria, Ind.
 884,461. Hose coupling. C. F. Browne, Washington, D. C.
 884,561. Automatic hose uncoupling. [For air brake hose.] W. S. Bowness, Moncton, New Brunswick.
 884,526. Tire construction. [Pneumatic tire tread.] F. A. Bragg, assignor of one-half to D. J. Brown, both of Springfield, Mass.
 884,634. Hose [with wrapping strip of knitted fabric]. H. T. Bragg, Yonkers, N. Y.
 884,702. Tire and wheel therefor. W. Bowden, New York city.
 884,794. Protecting casing for tire. L. N. Cates, St. Louis.

Trade Marks.

- 28,843. The Cravenette Co., Ltd., Bradford, England. The word *Cravenette*, in a straight line border. For parasols and umbrellas.
 29,062. The Fairbanks Co., New York city. A red disk. For rubber belting.
 30,058. J. F. Grosswiler, Toledo, Ohio. The word *Norall*. For rubber hose, belting, and packing.
 32,666. A. E. Little & Co., Lynn, Mass. The word *Sarcosis* in a circle. For rubber heels.
 33,039. National India Rubber Co., Bristol, R. I. The word *Colonial*. For water bottles and syringe bags.
 33,076. Gorham Rubber Co., San Francisco. The word *Fearless*. For rubber boots.
 33,206. India Refining Co., Philadelphia. The word *Parasub*. For an oil compound.

ISSUED APRIL 21, 1908.

- 885,962. Reinforced pneumatic tire. H. D. B. Lefferts, Orange, assignor of one-half to E. De Camp, Newark, N. J.
 885,210. Fabric. E. D. C. Hayne and L. A. Subers, Cleveland, Ohio.
 885,220. Machine for winding and placing under pressure a thread coated with non-fibrous and adhesive material. *Same*.
 885,336. Tire cushion for vehicles. W. E. Garvey, Cleveland, Ohio.
 885,515. Tire protector. H. Parsons, Southampton, England.
 885,530. Dress preserver or dress shield. G. H. Sachsenroder, Barmen, Unterharmen, Germany.
 885,628. Hedless overshoe. P. H. Margulis, New York city.
 885,646. Vehicle tires. M. B. Priest, Milwaukee, Wis., assignor to The Priest Tire Co.
 885,647. Pneumatic vehicle tire. *Same*.

Trade Marks.

- 27,954. Hannoversche Gummi-Kamm Co., A.-G., Hanover, Germany. The word *Koh-i-noor*. For rubber combs.
 32,541. Lambertville Rubber Co., Lambertville, N. J. The words *Oyster Bay* over the representation of a small figure seated in an oyster shell. For rubber footwear.

ISSUED APRIL 28, 1908.

- 885,796. Pneumatic and other tires. H. C. Shearman, Providence, R. I.
 885,797. Apparatus for capping hose sections. S. J. Sill, assignor of one-half to H. H. Hewitt, both of Buffalo, N. Y.
 885,860. Resilient vehicle tire. H. A. Palmer, Akron.
 885,862. Cementing apparatus. W. J. Steele, assignor to C. W. Phipps, both of Northampton, England.
 885,888. Concave vehicle tire. A. G. Thomson, San Francisco.
 885,922. Telephone system for fire hose. H. Groschwitz, Philadelphia.
 885,955. Manufacture of conveyor belting and machine belting. F. Reddaway, Pendleton, England.
 885,960. Vehicle wheel rim. E. C. Shaw, Akron, Ohio, assignor to The B. F. Goodrich Co.
 886,010. Rim for motor car wheels. D. C. Smith and W. F. Gorton, Muncie, Ind.
 886,272. Hose nozzle. S. Suzuki, Ogden, Utah.
 886,273. Suction device for securing glasses in place. J. J. Tanzey, assignor of one-half to G. Ulrich, both of Hartford, Conn.
 886,300. Dental vulcanizer. F. W. Korb and W. F. Hicher, assignors to The United States Dental Mfg. Co., all of Cleveland, Ohio.

- 886,316. Valve for tires. J. S. Dunn, assignor of one-third to S. T. Langdon, Jr., both of Vincennes, Ind., and one-third to L. C. Langdon, Oak Park, Ill.

Trade Marks.

- 6,682. The Safety Insulated Wire and Cable Co., New York city. The representation of an insulated cable. For covered electrical conductors.
 28,842. The Cravenette Co., Ltd., Bradford, England. The word *Cravenette*, in a straight line border. For waterproof tents and the like.
 33,351. Gorham Rubber Co., San Francisco. The word *Olympic*. For rubber hose.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1906 and 1907.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 1, 1908.]

- 27,654 (1906). Protective band for elastic tire. T. E. Doyle and J. H. Ryan, Dublin.
 27,661 (1906). Tire rim with removable flange. Pridaux-Brune, Bideford.
 27,800 (1906). Fastening for pneumatic tire. M. Marcell, Paris, France.
 28,051 (1906). Metal disk wheels adapted to carry pneumatic tires. H. Perkins, Stourbridge.
 28,085 (1906). Golf ball with gutta-percha core, wound with tensioned vulcanized thread. E. W. Thurlow, Northcote, Victoria, Australia.
 28,142 (1906). Means for preventing side slip in motor vehicles. P. E. Doolittle, Toronto, Canada.
 28,256 (1906). Removal of water of condensation from the cores of steam heated tire molds. F. Veith, Hoechst im Odenwald, Germany.
 28,362 (1906). Woven fabric tire inner tubes, to be coated with rubber and vulcanized. D. W. Yates and two others, Radcliffe, Lancs.
 28,331 (1906). Method of joining edges of rubber sheets for water bottles and the like. J. B. Brooks, Birmingham.
 28,330 (1906). Pressure gauge for tire inflating pumps. S. W. Amphlett and A. Roberts, Birmingham.
 28,346 (1906). Corrugation of pneumatic tire treads. A. B. Brown, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 8, 1908.]

- 28,425 (1906). Covers for footballs and the like, built up of sections of fabric coated with rubber. J. Turner and A. Buxton, Manchester.
 28,428 (1906). Golf ball filled with small rubber balls or pellets. J. H. Roger, Glasgow.
 28,436 (1906). Pneumatic tire without an inner tube. C. F. Newman, Twickenham.
 28,451 (1906). Stopper for hot water bottles. J. B. Brooks, Birmingham.
 28,469 (1906). Metallic protectors for tires. C. P. Doykin, Birmingham.
 28,494 (1906). Guard ring for buckets used in breweries. G. Kappler, Zurich, Switzerland.
 28,584 (1906). Detachable rim for pneumatic tires. A. Armitage, Taunton, and two others.
 28,597 (1906). Twin tire construction with chain ring to prevent slipping. E. G. Gosset-Tanner and R. T. Beane, London.
 28,625 (1906). Tire construction of fabric with or without rubber. J. Fenton and J. R. Tetlow, Cleckheaton.
 28,747 (1906). Spring wheel with pneumatic hub and elastic tire. L. A. Garchey, Paris, France.
 28,747A (1906). Spring wheel with elastic tire. *Same*.
 28,785 (1906). Spring wheel with tread resting upon a pneumatic tube. J. and A. Burfoot, Auckland, New Zealand.
 *28,813 (1906). Water tank with rubber ball valve. C. Willms, Baltimore, Maryland.

- 28,989 (1906). Spring wheel. A. Kenrick, Tunbridge Wells.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 15, 1908.]

- 29,152 (1906). Tire with composition core. A. and D. Fagioli, Southampton.
 29,177 (1906). Tire puncture closing device. A. J. Maffumabes, London.
 29,206 (1906). Puncture preventing band for tires. B. Noldner, Breslau, Germany.
 29,256 (1906). Nozzle for vaginal syringes. H. A. Kaysan, Cassel, Germany.
 29,264 (1906). Tire puncture protector. J. Lenderyou, London.
 29,267 (1906). Rim for pneumatic tires. J. H. Patterson, Aberdeen.
 29,376 (1906). Detachable tread for pneumatic tires. H. A. Vouriot, Paris, France.
 29,387 (1906). Cementing apparatus for work in bootmaking. A. Parsons, Newtown, Leeds, and three others.
 29,393 (1906). Brake for pneumatic tires. A. W. Selater, London.
 *29,426 (1906). Vulcanizing apparatus for pneumatic tires. T. Midgley, Hartford, Connecticut.
 29,492 (1906). Tire with composition core. R. R. Gubbins, London.
 29,537 (1906). Combination tire formed of spiral springs and rubber. L. Pesquisis, Rome, Italy.
 29,554 (1906). Rubber stopper. Soc. Chimique des Usines du Rhone, Paris, France.

- 29,574 (1906). Anti slipping attachment for wheels. J. R. Hamilton, Cheshunt, Herts.
 29,643 (1906). Spring wheel with elastic tire. J. Alloatti, Royat, France.
 29,651 (1906). Pneumatic tire. A. H. Vevenoge, Deauville-sur-Mer, France.
 29,684 (1906). Mold for pneumatic tire covers. E. A. Slater, Glasgow, and O. Ransford, Rutberglen.
 29,739 (1906). Elastic tire formed of coiled springs within a rubber cover. A. Vandervoort, Belleville, Ontario.
 29,760 (1906). Detachable rim for tires. J. Frankel, Paris, France, and another.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 23, 1908.]

- 1 (1907). Auxiliary wheel to prevent side slip. B. Dolby, Cardiff.
 4 (1907). Cushion tire for vehicles. E. L. A. Olivier, Paris, France.
 44 (1907). Pneumatic tire cover. G. R. A. Fluery, Paris, France.
 59 (1907). Protective cover for tires. H. F. Villard, Biarritz, France, and another.
 62 (1907). Elastic tire composed of bent sticks of cane, within a rubber cover. R. V. Wagner, London.
 166 (1907). Anti slipping device for tires. J. Briggs, Bradford.
 183 (1907). Vehicle wheel with pneumatic hub. B. H. Sills, Belleville, Canada, and two others.
 185 (1907). Spring wheel with rubber tire. C. Holt, London, and two others.
 247 (1907). Tire covers woven from duck yarns designed to prevent stretching. F. Reddaway, Manchester.
 253 (1908). Metal plates to prevent tire slip. A. Jennings, King's Heath.
 306 (1907). Tire tread of alternating rubber and leather segments. J. Bowack and F. R. Quilter, London.

THE FRENCH REPUBLIC.

Patents Issued (With Dates of Application).

- 381,920 (Sept. 16, 1907). C. Motz. Solid rubber wheel tire.
 381,934 (Sept. 16). W. E. Rowcliffe. Pneumatic tire and rim therefor.
 381,972 (Sept. 18). F. C. Wickel. Elastic motor car tire.
 381,845 (Aug. 24). L. R. Chauvin. Process for the manufacture of artificial teeth.
 382,068 (Sept. 2). A. Ungerer. Tire protector.
 382,154 (Sept. 23). A. Braido. Composition for tire repairs.
 382,053 (Nov. 28, 1906). J. Dupont. Rubber reclaiming process.
 382,108 (Sept. 20, 1907). Morerette. Mechanical process for the extraction of rubber.
 382,272 (Dec. 3, 1906). Lesage. Elastic material, suited particularly for vehicle tires.
 382,086 (Sept. 14, 1907). E. Servant. Braces for pneumatic tires.
 382,054 (Nov. 28, 1906). C. E. H. Gavelle. Balloon.
 382,320 (Sept. 9, 1907). T. Sloper. Apparatus for tire manufacture.
 382,400 (Sept. 28). H. Talasso. Elastic wheel.
 382,425 (Sept. 30). L. Liais. Pneumatic tire cover.
 382,569 (Oct. 1). L. A. Noel. Elastic tire.
 382,571 (Oct. 4). Worms and Flamant. Process for the separation of resins from the latex of caoutchouc.
 382,626 (Oct. 5). J. L. Finot. Pneumatic tire.
 382,800 (Aug. 22). Hawley and Baker. Pneumatic tire.
 382,823 (Oct. 3). E. Herkner. Pneumatic tire.
 382,612 (Oct. 5). Montegut and d'Etreillis. Elastic tissues for garments.
 382,948 (Oct. 16). Kempshall Tyre Co. of Europe, Ltd. Wheel tire.
 383,127 (Oct. 19). L. A. Noel. Elastic wheel.
 383,149 (Oct. 19). Schwarz and Schmidt. Protective tread for tires.
 383,223 (Oct. 23). B. V. Wittenberg. Pneumatic tire.
 383,218 (Dec. 29, 1906). M. Malzac and D. Lance. Combination of leather and caoutchouc.
 383,315 (Oct. 2, 1907). C. Revillard. Pneumatic tire.
 383,347 (Oct. 26). A. T. Hughes. Protective tread for tires.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. E. Bet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

A ROYAL APPLICANT FOR A PATENT.

PRINCE HENRY of Prussia, whose interest in automobilism is a matter of common knowledge, is referred to as a recent applicant for a patent on a device to keep mud and moisture from obstructing the view through glass wind shields. The apparatus is simple, consisting of two arms equipped with rubber edges. The arms are fastened on pivots on either side of the wind shield. A handle is located within convenient reach of the driver, and by turning this handle the rubber edges are moved over the glass, somewhat in the manner that window washers employ when using a similar device on large store windows.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statements of values of exports of manufactures of india-rubber and gutta-percha for March, 1908, and for the first nine months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
March, 1908.....	\$116,400	\$37,613	\$317,004	\$471,077
July-February	924,585	1,305,352	2,485,307	4,715,244
Total	\$1,040,985	\$1,342,965	\$2,802,371	\$5,186,321
Total, 1900-07....	914,270	602,004	2,664,067	4,542,207
Total, 1905-06....	942,654	1,340,602	2,125,551	4,408,807
Total, 1904-05....	670,551	1,062,751	1,831,748	3,565,030
Total, 1903-04....	667,507	940,439	1,799,522	3,410,528

ITALIAN IMPORTS.

The imports of rubber goods into Italy in 1906, according to the United States consul at Milan, amounted in value to \$2,192,538, against \$1,707,066 in 1905. During the first 11 months of 1907 such imports amounted to \$2,640,421, not including 126,000 pairs of rubber footwear of the value of \$132,533. The bulk of the footwear came from the United States and Germany, each country exporting about the same quantity. The consul reports that the manufacture of rubber shoes has lately been established at Milan.

TARIFFS AND COMMERCIAL TREATIES.

The new Venezuelan customs tariff, promulgated on January 13, 1908, enumerates a number of items of rubber goods. The items chargeable at 75 centimes per kilogram [= \$6.56 per 100 pounds] for rubber hose and belting and rubber tired wheels. For the following goods the rate is 2.50 bolivars per kilogram [= \$21.87 per 100 pounds]: Rubber girdles, shoe elastics, galoshes, and rubber goods generally. The rate on elastic webbing, whatever the character of the fabric involved, is 5 bolivars per kilogram [= \$43.74 per 100 pounds].

A new commercial treaty between Canada and France provides for the admission into the latter country, or into any of its colonies, of certain Canadian products under the minimum French tariff. The articles listed comprise all manufactures of india-rubber.

HISTORY OF GOLF BALL MARKING.

ROBERT SIMPSON, a Western golf champion, tells the Omaha *World-Herald* how golf balls came to have marked surfaces, instead of being perfectly smooth, as when the balls were first made of gutta-percha. Then, he says, it was impossible to make a perfectly straight shot. The caddies on St. Andrews and Carnoustie links, Scotland, where Simpson learned the game, began to bat the balls around, of course, and in a short time they became considerably maimed and chopped up. The caddies soon discovered that these old balls, cast off by the aristocrats and experts, after having been sufficiently abused, would carry farther and truer than the new ones.

This fact became known to the professionals, who began to deliberately hack the balls with chisels and hatchets before using them, with good results. Soon afterward the manufacturers recognized the importance of this idea and began to mold balls with the corrugations. Hence the present day article, which has been driven 300 yards on the course.

SEVERAL specimens of rubber from the climbing plant *Cryptosegia grandiflora*, sent from India to the Imperial Institute, in London, for examination, were reported to exhibit very fair elasticity and tenacity. This plant is reported to be very abundant, especially in the presidency of Bombay.



OFFICERS AND DIRECTORS OF THE UNITED STATES RUBBER COMPANY.

1—Samuel P. Colt (president), 2—E. C. Benedict, 3—Lester Leland (second vice president), 4—John J. Watson, Jr. (treasurer), 5—Anthony N. Brady, 6—James B. Ford (first vice president), 7—Walter S. Ballou, 8—Homer E. Sawyer (general manager), 9—Charles H. Dale, 10—John D. Vermeule, 11—Frederick M. Shepard, 12—Henry L. Hotchkiss, 13—Francis Lynde Stetson, 14—Frank S. Hastings, 15—Harry E. Converse, 16—J. Howard Ford, 17—John D. Carberry (assistant secretary), 18—Samuel Norris (secretary), 19—Arthur L. Kelley, 20—W. G. Parsons (assistant treasurer), 21—

United States Rubber Co.'s Annual.

THE sixteenth annual meeting of shareholders of the United States Rubber Co., incorporated under the laws of New Jersey, was held at the registered offices of the company in that state, at New Brunswick, on May 19. The operations of the company during the last business year and its condition at the close of the year, are indicated in the annual reports of officers, as read and approved, and which are presented here.

PRESIDENT'S ANNUAL REPORT.

TO THE STOCKHOLDERS OF THE UNITED STATES RUBBER CO. It is a source of satisfaction that, in spite of the great business depression throughout the country, the business of our company compares as favorably as it does with that of the previous year—the largest in its history, especially as due consideration is to be given to the fact that our fiscal year ends March 31, thus including six months largely affected by the financial depression. For the first six months—April to September, 1907—the business was largely in excess of the corresponding period for the previous year.

The treasurer's report, which follows, gives the result of the operations of the company and its subsidiary companies for the fiscal year, and shows their condition at the close of the year.

It has been the policy of the management to conduct the business of the company in the most conservative manner, and in all its departments and branches there have been introduced rigid economies, bringing about in the manufacturing and selling organizations consolidations which assure better results in the future, while preserving the efficiency of our organization and maintaining the high standard of the quality of our goods.

The funding notes of the company, which matured March 15, 1908, were provided for by the sale of a new issue of like notes for the same amount, payable September 15, 1909.

Arrangements have been made for payment of the issue of \$4,800,000 of debenture bonds of the Boston Rubber Shoe Co., which matures August 1, 1908, through the sale of a new issue of \$4,500,000 of similar debenture bonds, payable September 15, 1910, the balance to be provided for by cash in the treasury.

The net profits of the United States Rubber Co. for the past year, not including the company's proportion of surplus earnings of some of its subsidiary companies not actually received in dividends, are \$3,553,550.14, which are considered satisfactory, in view of the manufacturing and selling conditions which have existed during the year, and taking into account the conservative prices at which materials on hand have been inventoried in our balance sheet of March 31, 1908.

The company did not advance the selling price of its manufactured goods in comparison with the abnormally high price of crude rubber which prevailed early in the year, and the lower price now prevailing for this important item in the cost of our goods should enable the company to receive a larger, yet reasonable, profit on its product for the coming year, as our selling prices remain unchanged.

The company has paid the regular 2 per cent. quarterly dividends on its first preferred stock, and 1½ per cent. quarterly dividends on its second preferred stock.

Important changes have been made in the conduct of our export business, which, while materially reducing the expense in the operation of this department, should tend to satisfactory results.

The business of the Rubber Goods Manufacturing Co. held up remarkably well during the calendar year of 1907. The net results obtained, considering the general trade conditions during the latter part of the year, are all that could reasonably be expected.

The promptness, with which the entire business of the com-

pany was adjusted to the change from the favorable conditions of the first six months of our fiscal year to the unfavorable and difficult conditions prevailing during the last six months, reflects credit on the individual effort of all who are in responsible positions in our various departments and subsidiary companies, and, coupled with the fact that we have kept our mills in every way in excellent physical condition, warrants us in anticipating that, with a return of general prosperity, we may look for improved results. Respectfully submitted,

SAMUEL P. COLT, President.

New Brunswick, New Jersey, May 19, 1908.

TREASURER'S REPORT.

UNITED STATES RUBBER CO. AND SUBSIDIARY COMPANIES. CONSOLIDATED GENERAL BALANCE SHEET, MARCH 31, 1908.

[Not including Assets or Liabilities of the Rubber Goods Manufacturing Co., or of its subsidiary companies.]

ASSETS.

Property and plants (including shares of R. G. M. Co.)	\$74,734,539.77
Inventories, manufactured goods and materials	\$13,533,169.81
Cash	2,723,380.75
Bills and loans receivable	914,250.84
Accounts receivable	8,494,234.66
Securities owned	8,174,730.24
Miscellaneous assets	612,720.57
Total Assets,	\$109,267,026.64

LIABILITIES.

Capital stock, first preferred	\$36,203,000.00
Capital stock, second preferred	9,995,000.00
Capital stock, common	25,000,000.00
Boston Rubber Shoe Co. debentures	4,800,000.00
United States Rubber Co. Funding Notes	8,000,000.00
Loans and notes payable	\$2,440,077.55
Merchandise accounts payable	362,634.55
Due General Rubber Co.	7,164,111.61
Total Liabilities	\$109,267,026.64
Deferred liabilities	77,893.98
Reserve for dividends	874,735.00
Fixed surpluses (subsidiary companies)	8,134,849.37
Surplus	6,184,814.58

[The contingent liability for certain guarantees, which are offset by corresponding contingent assets, are not included.]

CONSOLIDATED INCOME STATEMENT FOR YEAR ENDING MARCH 31, 1908.

Gross Sales, Boots and shoes and miscellaneous	\$62,096,105.54
Net Sales, Boots and shoes and miscellaneous	\$41,860,425.96
Cost of goods sold	35,462,394.29
Manufacturing profits	\$6,398,031.67
Freight, taxes, insurance, general and selling expenses	1,013,127.41
Operating profits	\$4,484,004.26
Rubber Goods Mfg. Co. dividends	\$800,733.00
Other income	178,037.84
Total income	\$5,553,675.10
Less:	
Interest and commission on funding notes and borrowed money	\$1,320,587.14
Interest on Boston Rubber Shoe Co. debentures	240,000.00
Interest allowed customers for pre-payments	297,480.78
Net income to surplus	\$3,695,607.18
Deduction for bad debts, etc.	142,051.04

Net profits	\$3,553,556.14
Dividends	3,495,448.00
Surplus for period.....	\$58,108.14
Surplus April 1, 1907.....	6,120,706.44
Surplus March 31, 1908.....	\$6,184,814.58

JOHN J. WATSON, JR., Treasurer.

The accounts are verified by the company's auditors, Haskells & Sells, certified public accountants, who find that the quick assets of the company, on March 31, 1908, exceeded all the liabilities other than capital stock and surplus accounts to the extent of \$12,066,403.61.

THE ANNUAL ELECTION.

THE board of directors, nineteen members, was reelected. The list is as follows, together with the number of terms for which each member of the board has been chosen:

Walter S. Ballou, Providence, Rhode Island.	[6.]
Elias C. Benedict, No. 80 Broadway, New York.	[7.]
Anthony N. Brady, No. 54 Wall street, New York.	[5.]
Samuel P. Colt, Bristol, Rhode Island.	[17.]
Harry E. Converse, Boston, Massachusetts.	[11.]
Charles H. Dale, No. 16 Warren street, New York.	[3.]
James B. Ford, No. 42 Broadway, New York.	[17.]
J. Howard Ford, No. 42 Broadway, New York.	[17.]
Frank S. Hastings, No. 80 Broadway, New York.	[4.]
Francis L. Hine, No. 2 Wall street, New York.	[6.]
Henry L. Hotchkiss, New Haven, Connecticut.	[17.]
Arthur L. Kelley, Providence, Rhode Island.	[3.]
Lester Leland, Boston, Massachusetts.	[10.]
Homer E. Sawyer, No. 42 Broadway, New York.	[3.]
Frederick M. Shepard, No. 787 Broadway, New York.	[17.]
Francis Lynde Stetson, No. 15 Broad street, New York.	[7.]
William H. Truesdale, No. 26 Exchange place, New York.	[4.]
John D. Vermeule, No. 503 Broadway, New York.	[12.]
John J. Watson, Jr., No. 42 Broadway, New York.	[4.]

The newly elected board met in New York on May 24 and after organizing reelected the following officers and executive committee:

President—SAMUEL P. COLT.
First Vice President—JAMES B. FORD.
Second Vice President—LESTER LELAND.
General Manager—HOMER E. SAWYER.
Treasurer—JOHN J. WATSON, JR.
Assistant Treasurer—W. G. PARSONS.
Secretary—SAMUEL NORRIS.
Assistant Secretary—JOHN D. CARBERRY.

The executive committee consists of Samuel P. Colt, James B. Ford, Lester Leland, E. C. Benedict, Walter S. Ballou, Anthony N. Brady, and John J. Watson, Jr.

A MATTER OF HISTORY.

THE following table, showing the amount of net profits of the United States Rubber Co. and the amounts disbursed in dividends since the organization of the company, has been compiled from the printed reports of the successive treasurers of the corporation:

YEAR ENDING	Net Profits.	Dividends.
March 31, 1893.....	{ [Not published.] }	
March 31, 1894.....	{ }	
March 31, 1905.....	\$2,716,370.00	\$2,056,190.00
March 31, 1896.....	2,339,790.60	1,552,040.00
March 31, 1897.....	1,999,611.34	1,552,040.00
March 31, 1898.....	2,070,750.41	1,552,040.00
March 31, 1899.....	3,226,513.46	1,882,040.00
March 31, 1900.....	3,007,887.54	2,828,680.00
March 31, 1901.....	62,605.57	705,765.00
March 31, 1902.....	deficit	none
March 31, 1903.....	1,504,908.16	none
March 31, 1904.....	1,575,641.29	none
March 31, 1905.....	3,761,922.63	1,882,040.00
March 31, 1906.....	3,881,270.23	2,846,092.00
March 31, 1907.....	4,500,382.72	3,485,956.00
March 31, 1908.....	3,553,556.14	3,495,448.00

The net profits reported above, prior to March 31, 1902, are for the United States Rubber Co. alone, in its distinct corporate capacity. In the year in which a deficit occurred, in the accounts of the parent company, it is understood that in the aggregate the business of the subsidiary companies would have shown a surplus. For the subsequent years the figures are derived from con-

solidated reports of the "United States Rubber Co. and Subsidiary Companies," covering their total income, but not including details for the Rubber Goods Manufacturing Co.'s transactions further than the dividends from the latter accruing to the United States Rubber Co. during the last three years. The dividends paid in 1900-01 were declared in the first half of the year, when the condition of the company appeared better than later proved true, the net result being a reduction of the surplus.

UNITED STATES RUBBER CO.'S NEW BOSTON OFFICES.

THE Boston offices of the United States Rubber Co. and the Boston Rubber Shoe Co. have been most desirably located for several years past in the Converse building, at No. 101 Milk street, except that this is quite a distance from the shoe trade center. With the idea of getting into the shoe district the offices of these two companies have been moved to No. 140 Essex street, corner of Columbia. These new offices are not only more conveniently situated for easy access by rubber jobbers, but they are an improvement in other respects over any offices the companies named have hitherto had in Boston. The occupy the entire ground floor and the basement. The ground floor, about 65 x 100 feet, is practically one large room, being petitioned off into various departments only by a railing. A wide aisle runs from the center door almost the entire length of the building. The first space at the left of the rail—about 25 x 65 feet—is given over to the selling department, and is occupied by Messrs. Coe, Jones, Wilson, Balderston, Phipps, Stevens, Palmer and Hill. Back of this division the American Rubber Co. have the sales office of their clothing department, in charge of Mr. Eustis and Mr. Gillett. H. E. Sawyer, general manager, Edward R. Rice, manager of sales, are also provided with desks for use on the occasion of their frequent visits to the Boston office. The most interesting feature of the new office, however, is the space immediately to the right of the entrance, which is devoted exclusively to convenience of the jobbers. It is furnished with desks, conference tables, comfortable chairs, telephone facilities, and the like, for the use of visiting customers. Back of the customers' room, at the right of the main aisle, are private conference rooms, and back of these is probably the finest rubber sample room in the United States, 25 x 36 feet in size.

COLCHESTER RUBBER PLANT BURNED.

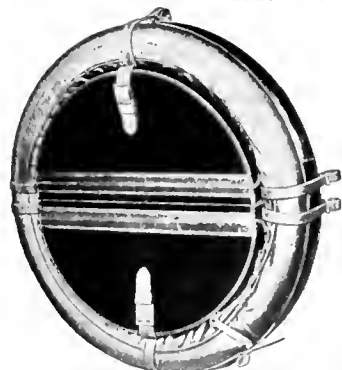
A FIRE at Colchester, Connecticut, on the night of May 13, destroyed a factory property owned by the United States Rubber Co., which, though unused of late, was of no little historic interest. In the spring of 1847 the rubber shoe manufacture carried on by Nathaniel Hayward on a small scale at Lisbon, Conn., was transferred to a joint stock company just formed, under the name Hayward Rubber Co., which removed the business to Colchester, and in that year the first of the buildings just burned was erected. Included in the company were Mr. Hayward, Henry Burr, and William A. Buckingham, all of whom attained prominence in the trade, besides which Buckingham, for nearly 40 years treasurer of the company, served ably as governor of Connecticut and later as United States senator. The Hayward Rubber Co. were licensees under Goodyear's patents, and long ranked among the most important rubber footwear concerns.

The plant was taken over by the Colchester Rubber Co., organized by George Watkinson and incorporated in April, 1888, after which a larger business was done for a while than in the best days of the Hayward company. The Colchester company became affiliated with the United States Rubber Co. in August, 1893, and a year later the machinery was removed to other factories.

The Editor of THE INDIA RUBBER WORLD was at one time manager of another factory of the Hayward Rubber Co., at Bozrahville, Conn., and later assistant superintendent at the Colchester factory.

New Rubber Goods in the Market.

AUTOMOBILE TRUNKS.



AUTO HAT TRUNK.

of trunks and such like goods has brought out a line of automobile trunks, several of which are illustrated on this page. The first is a trunk for hats. This is designed to fit inside the extra tire shoes carried usually on the running board of the car. It is made full size of inside space, and



LIMOUSINE TRUNK.



AUTO LUNCH TRUNK.

so arranged as to carry ladies' or men's hats. Or it may be made plain for carrying inner tubes. This trunk comes in various grades, from \$12 up. The next article illustrated is a trunk made to go on top of limousine bodies of automobiles, and is so constructed as to hold two shoes, with a space in the centre for extra tubes and the like. Trunks of this style are made of various materials, the most popular being of black enamel waterproof dashboard leather, hand sewed; also, of black enamel waterproof material, as used in buggy tops. The tire lunch trunk is shown in the last, and smallest, illustration. The waste space inside the tires usually carried on the running board has been utilized by making two trunks, each one-half the diameter, one above the other, arranged for carrying all the articles necessary for a substantial lunch by the roadside. These trunks can be used plain, without any fittings for lunches if desired. [W. W. Winship, No. 71 Summer street, Boston.]

THE "PEN-O-FIL."

A RECENT patent relates to a device which is referred to as making "any pen a fountain pen in a second." The illustration shows an ordinary steel pen over which has been slipped a small piece of rubber, cut in a special shape, thus forming a reservoir for ink. The object of its use is to enable the user to write a number of lines—say any ordinary letter—with one dip of ink, thus lessening greatly the number of times one must go to the ink well. Another advantage is that it prevents ink sediment or hairs clotting the pen, and the blotting of papers from frequent dipping. [The Pen-O-Fil Co., No. 205 Broadway, New York.]



THE "PEN-O-FIL."

THE "UNBREAKABLE DEVIL."

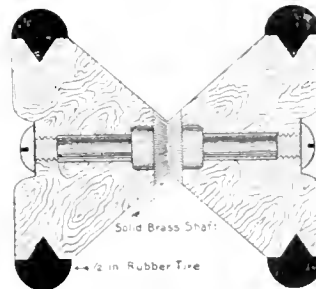
A new form of outdoor sport which from every indication will become extremely popular in the United States this summer has had different names applied to it by the various manufacturers

of the devices employed in it. One name, for instance, is "Diabolo," but the illustrations on this page relate to an outfit called by the manufacturer "L'Incassable," or "The unbreakable devil," the French word employed meaning unbreakable. L'Incassable consists of two half spools, connected by a brass shaft 2 inches long, automatically timed and so devised that with the end screws it forms one draft all the way through the spool, with the center groove absolutely



"L'INCASSABLE" ACTION.

ly in the center, the spool thus being exactly balanced as well as being unbreakable. The sectional cut herewith indicates how the rubber tires used fit the spool. When the space is dropped



"L'INCASSABLE"

[Sectional cut of spool, the blacker portions showing the rubber tires.]

the rubber protects both the spool and the object on which it falls, besides which the game is rendered practically noiseless. If preferred, L'Incassable spools, instead of having tires as shown here, may be had with rubber capped ends. There are also required for the game a pair of bamboo sticks joined by a cord. The player first gets the spool in motion—"spinning"—on the cord, while holding the sticks at a convenient height, until the proper speed has been attained, when it is thrown into the air. An illustration here shows the player catching the spool as it comes down. If she catches it, and it is spinning rapidly, it may be thrown into the air and caught again, time after time. When players have become experts they may play with partners. [French-American Toy and Novelty Co., No. 404 West Broadway, New York.]

STEEL ARMORED AIR BRAKE HOSE.

THERE has been illustrated already in these pages a view of steel armor for rubber hose, constructed under a comparatively new process. The smaller of the two cuts herewith is given with a view to repeating this description without the use of many words. The purpose in referring to this style of armored hose again is to call attention to the application of this principle in making hose for air brake and signal line purposes on railways. A section of air brake hose so constructed is illus-

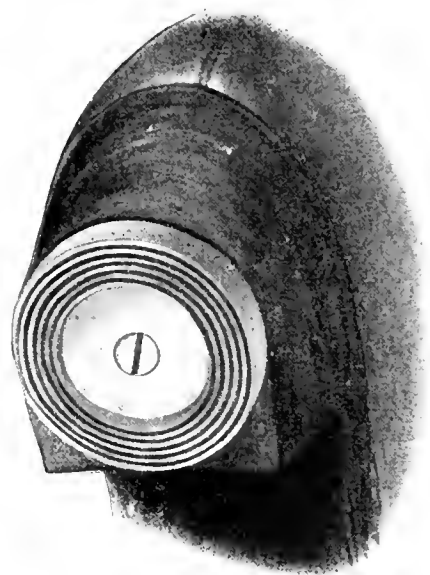
trated in another accompanying cut. By the use of armored air brake hose, danger of the hose being injured through pinching, kinking or chafing is avoided, while in the case of punc-

at the heel" or "run over." Such heels are referred to as preventing slipping and falling, and as having a good effect on



VIEW OF ARMOR CONSTRUCTION.

tures the armor so protects the hose that the leakage is not sufficient to set emergency brakes. As illustrating the strength given to hose by the armor under review, it is asserted that a one



"TREAD-LEVEL" RUBBER HEEL.

FLEXIBLE STEEL-ARMORED HOSE FOR AIR BRAKE SERVICE.

inch 3 ply hose equipped with it will stand a hydraulic pressure of 2000 pounds. [Sprague Electric Co., No. 257 West Thirty-fourth street, New York.]

"LADIES' COMPANION" RUBBER.

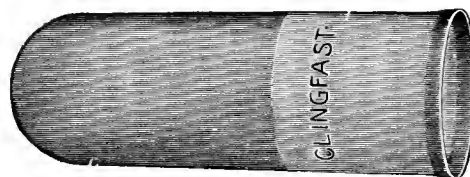
THE illustration relates to what is called the Ladies' Companion rubber, the form of which is clearly indicated. This is an extra light shoe, adapted for showery weather, rather than downpours. It is designed especially for the use of ladies out

the health of the wearer through affording a constant, even distribution of weight on the heel. [The James Manufacturing Co., Cleveland, Ohio.]



"CLINGFAST" FINGER COT.

THE accompanying illustration relates to a reinforced rubber finger cot, which has distinct advantages over goods in this line of the types previously made. It is essential that such goods

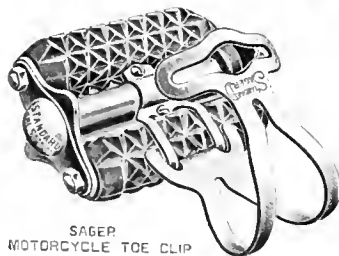


CLINGFAST FINGER COT.

shopping, when the clouds are uncertain, and, being very light, may be carried conveniently in a neat bag provided for the purpose, and put on when needed. [Rochester Footwear Co., Rochester, New York.]

SAGER MOTORCYCLE TOE CLIP.

THE Sager toe clip, having proved so satisfactory for use in connection with rat trap pedals, has been modified to fit it to the very comfortable rubber pedals which have been brought out by the same firm for the use of motorcyclists. The rubber pedals being longer than the rat trap, a toe clip of different form of course became necessary, and the new article shown in the illustration is the result. [The Standard Co., Torrington, Connecticut.]



"TREAD-LEVEL" REVOLVING HEEL.

IN use the Tread-Level revolving rubber heel turns lightly at every step, thus wearing off regularly and affording a constant sure footing. Shoes equipped with this device do not get "down

have a maximum of strength with a minimum of weight, and the design of the manufacturers of this line of goods has been to give the strength at the most essential point, as will be clearly indicated by the cut shown. [Huron Rubber Co., Cleveland, Ohio.]

TO CARRY HOSE OVER CAR TRACKS.

THE test of a method of hoisting fire hose above the street car tracks so as to avoid blocking them in case of a fire recently took place at Toronto, Ont. It proved to be very superior to the cumbersome rail device often used, by which the cars are carried over the hose. The invention of Outside Superintendent McCoullough, of the street car system of that city, reverses the old styles of proceeding. By means of a tackle and bucket on two opposite trolley poles, the hose is caught up and hoisted to a position just below the wires. By that means every car passing under it has its trolley pulled down for the moment; but the impetus is always sufficient to carry it past. Though the apparatus used on the occasion of the test was somewhat rudely constructed, it proved a gratifying success. It is claimed for the buckets that they can be attached in five minutes with the hose in operation, and that they may be conveniently carried about.—*Fire and Water Engineering.*

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE marked activity in the tire trade mentioned in these columns a month ago, contrary to the expectation of some manufacturers, has continued, and the present sees the larger tire producing concerns here working their factories night and day to full capacity. Every bit of space and machinery available for tire making has been utilized, and even with these conditions some companies are understood to be thousands of sets behind their orders. The sudden demand a month or two ago was thought to be merely a spurt, but the continued and growing inpouring of orders is convincing manufacturers that the only explanation is that there is a reaction from the business depression of last winter.

"The amazing demand for automobile tires," said an official of The B. F. Goodrich Co., "is partly due to the fact that even wealthy men are reequipping last year's cars with new tires instead of buying new machines out of the stock of the automobile manufacturers. We expect this rush to continue for a month or two."

While Akron tire makers were eager to be represented in every automobile contest that took place in former seasons, they say that the number of these events has so increased this year that only a part of them can be entered. Just now they are watching closely the preparations for the double transcontinental tour for stock cars to be undertaken under the auspices of the *New York Times*. They believe that the run will prove to be a test for tires especially.

On account of crowded conditions in the new six-story factory building of The Diamond Rubber Co. it is probable that a new structure will have to be erected for the Marsh rim factory when that is moved from Columbus to Akron. The recently built addition increased the floor space of the plant by more than 230,000 square feet, and it was designed to locate the rim factory in it, but the growth of the tire business is rendering necessary a change of plans.

The Miller Rubber Co. are about to begin the construction of a three-story addition to their plant, 80 x 30 feet. W. F. Pfeiffer, secretary and treasurer of the company, said that it was expected to have the building ready in 90 days. A complete line of dentists' sundries and molded goods will be manufactured. The company have been operating in the city over ten years.

The Swinehart Clincher Tire and Rubber Co. are planning important changes in the New York and Chicago branches. The New York branch will be moved from the present location at No. 1843 Broadway to a three-story building recently leased at 875 Seventh avenue, above Fifty-sixth street. The change will be made June 1. A new enamelled tile building, three stories high, 172 x 27 feet, is under construction at No. 1720 Michigan avenue, Chicago, to which the branch store in that city will be moved from No. 1231 Michigan avenue on July 1.

During the last two months the Swinehart company have been extending the manufacture of their new demountable rim for motor truck tires. As with the demountable pneumatic tire rim, the new product for solid tires makes it possible to change tires quickly, thus rendering it unnecessary to lay up trucks for repairs on account of tire trouble.

A number of Akron rubber manufacturers are coöperating in the efforts of the commercial interests to organize an Akron chamber of commerce. C. B. Raymond, secretary of The B. F. Goodrich Co., and A. H. Noah, treasurer of The Diamond Rubber Co., are directors in the organization, and a number of other manufacturers are actively interested as members of preliminary committees. A large part of the capital stock of \$100,000 has been subscribed.

Mr. J. F. Singleton, advertising manager of the Firestone Tire and Rubber Co., left on April 25 for a two months' pleasure trip through the West. He has made stops at various cities through the Southwest and after spending some weeks on the

Pacific coast and in the hunting grounds of Idaho, he will return by way of the northern route. In his absence, Mr. W. G. Slater, of Cleveland, an advertising man of experience, is acting as advertising manager of the Firestone company.

W. M. Perrett, for six years manager of the Detroit branch of The Diamond Rubber Co., resigned from that position four weeks ago. George J. Bradley, manager of the Cleveland branch, was made manager of both the Detroit and Cleveland branches.

W. T. Helfer, formerly manager of the Boston branch of The Diamond Rubber Co., and prominent in the rubber trade, was a recent visitor to Akron. He is now engaged in the automobile-body manufacturing business in Springfield, Massachusetts.

S. G. Carkhuff, secretary of the Firestone Tire and Rubber company, left during the latter part of May for an extended pleasure and business trip through the West.

At the offices of The Diamond Rubber Co. considerable satisfaction is expressed by reason of the showing made by the Diamond demountable rim in the Briarcliffe races last month. They were issued by the Lozier No. 7, the Thomas No. 12, the Lozier No. 9, and the Apperson No. 3. The company have issued a booklet containing the record of the tires in the races.

A new chemical laboratory is to be built at once by Buchtel College, of Akron, which will be equipped with a special rubber laboratory. It will be provided with modern appliances for research work in the chemistry of india-rubber, with a special view of affording opportunities to chemists in local companies to pursue advanced experimental work.

THE RUBBER TRADE AT SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE period of two weeks celebration which San Francisco experienced while the battleships lay in the harbor has just passed; the ships sailed out quietly, and very differently from the noisy reception of their entrance, and the vast assemblage of visitors is as quietly disappearing. While the fleet was here the hotels, cafés, and kindred places were the great centers of business activity, and such houses as the rubber stores had almost as well have been closed. Nevertheless, the rubber establishments now report that the city business has been benefited to a very large extent, owing to the new money which has been left here to circulate in all commercial channels.

The wholesale business of dealers in rubber goods has shown such a marked improvement during the past few weeks that the merchants all look forward with confidence in the favorable outcome of trade on the Pacific coast. The conditions are so favorable throughout the interior of the states along the Coast that only a greatly unexpected event would stem the tide of prosperity. There is no one in the local trade who does not expect to see the old time business activity revived within the next two or three months.

Mr. Chase, manager of the Bowers Rubber Works, states that trade has shown continual improvement. "The conditions have been somewhat peculiar," he said. "Each month we have been wondering where the next month's business was coming from, and we have wondered for the past six months, but by dint of perhaps a little extra effort we have each time come out at the end of the month with a flourishing business. We have been remarkably fortunate in keeping our full force at work in the factory, and even running full time."

Morgan & Wright have discontinued their San Francisco branch store, which since the fire two years ago, has been located at No. 433 Golden Gate avenue, and the agency for their automobile and solid vehicle tires has been placed in the hands of the new and progressive firm of Weinstock & Nichols, for Northern California and Nevada. The latter firm are located at No. 602 Turk street, and are successors to the Harris Rubber and Supply Co.

The Chanslor & Lyon Motor Supply Co. have recently secured

the coast agency for the Hartford tires, the Hartford branch, formerly located at 433 Golden Gate avenue having been discontinued. The supply company are located in a large and busy store at No. 542 Golden Gate avenue.

The Peerless Leather Tire Co. have been recently incorporated and opened a place of business at No. 456 Golden Gate avenue.

The report from the local branch of the Pennsylvania Rubber Co. is that business is good and steadily improving. Collections are reported as being fairly good. "Our last month's business was 25 per cent. bigger than for any months for a long time back, and so far in May trade is showing up so well that the outcome should be ahead of last month. The entire country, and especially the Pacific coast is in a first class shape."

Following the changes in the firm of Barton-Squires-Byrne, Inc., Messrs. Squires and Byrne having withdrawn, the re-organized company has been changed in name to the Barton Packing and Rubber Co. They are located on Howard street, between First and Second.

The Stevens-Elkington Rubber Co. of San Francisco has recently filed articles of copartnership.

Joseph V. Selby, manager of the branch office of the Boston Woven Hose and Rubber Co., has moved the office from its temporary location at First and Fulton streets to permanent quarters at No. 507 Mission street.

Mr. Sargeant, of the Gorham Rubber Co., states that sales are steadily increasing. Sales in the country, particularly, are very much improved and prospects are a great deal brighter than a few months ago. "It would appear that it is simply a question with the buyer in placing his orders. As soon as he feels that he will be able to meet his obligations he will not hold back.

The Diamond Rubber Co., which since the fire of two years ago has been holding forth with the main branch in Oakland, is now moving all the departments back to this side, having secured large and elegantly furnished quarters on the corner of Mission and Second streets.

The Sterling Rubber Co. have secured permanent quarters at No. 166 Second street, where they will be installed by about June 1.

R. H. Pease reports for the Goodyear Rubber Co. that business is perhaps not as active as at this time in former years, but that it is running along satisfactorily considering the times, and that there are a great many orders coming in for future delivery. Collections, he says, have been remarkably good. This firm will move into its new building at No. 587 Market street by the first of June. The store will connect with the store which runs around on Second street, so that they will have a great deal of floor space. Mr. Pease, together with his son, who has recently come into the business, have returned from their eastern trip and in the early part of July will go to Portland, Oregon, to spend the summer.

The Gutta Percha and Rubber Manufacturing Co., of New York, who went into temporary quarters at Alameda after the great fire, have moved their Pacific coast branch into San Francisco again, and are now established at Nos. 69-71 First street.

RUBBER INTERESTS IN EUROPE.

GERMANY.

THE tenth annual meeting of the Frankfurter Asbestwerke Aktiengesellschaft (formerly Louis Wertheim) was held at Frankfurt a/M. on April 25, where accounts were presented for the business year ending December 31. The dividends for the year amount to 7 per cent., the same as for 1906. In 1905 the dividend was 5 per cent.

Asbest- und Gummiwerke Alfred Calmon Aktiengesellschaft (Hamburg) during their twelfth business year had trading profits of 915,444 marks and net profits of 412,671.72 marks. A

liberal amount was written off for depreciation, and a dividend declared of 6 per cent. on the capital of 6,000,000 marks, the disbursement amounting to 360,000 marks [= \$85,680].

GREAT BRITAIN.

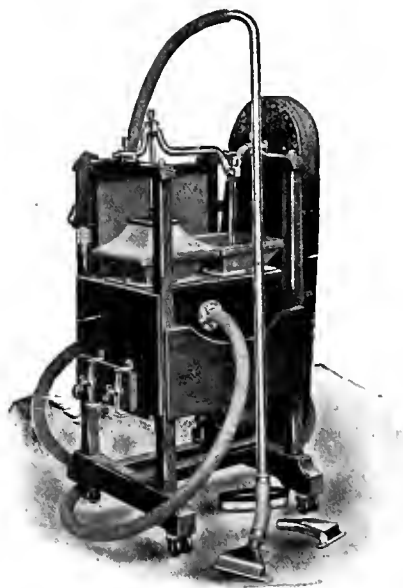
THE directors of British Insulated and Helsby Cables, Limited, report for the business year 1907 a profit of £135,620 [= \$659,904.73] against £197,112 in the preceding year and £133,002 in 1905. Dividends: 6 per cent. on the preference shares and 8 per cent., with a bonus of 2 per cent., on the ordinary—total disbursement of £80,000 [= \$380,320]. Besides, £22,500 went for interest on the £500,000 of debentures. The volume of business was large, but profits were adversely affected by the high price of copper early in the year and the general financial stringency later.

FRANCE.

A NEW journal has been established in Paris—the *Revue Internationale du Caoutchouc de la Gutta-Percha*. The director is W. K. Karolewski, and the offices at 12, boulevard de Strasbourg. The first issue, dated March 10, contains articles of interest on vulcanization processes, reclaiming rubber, extraction of latex, rubber substitutes, the Congo rubber situation, and so on.

PORTABLE SUCTION CLEANER.

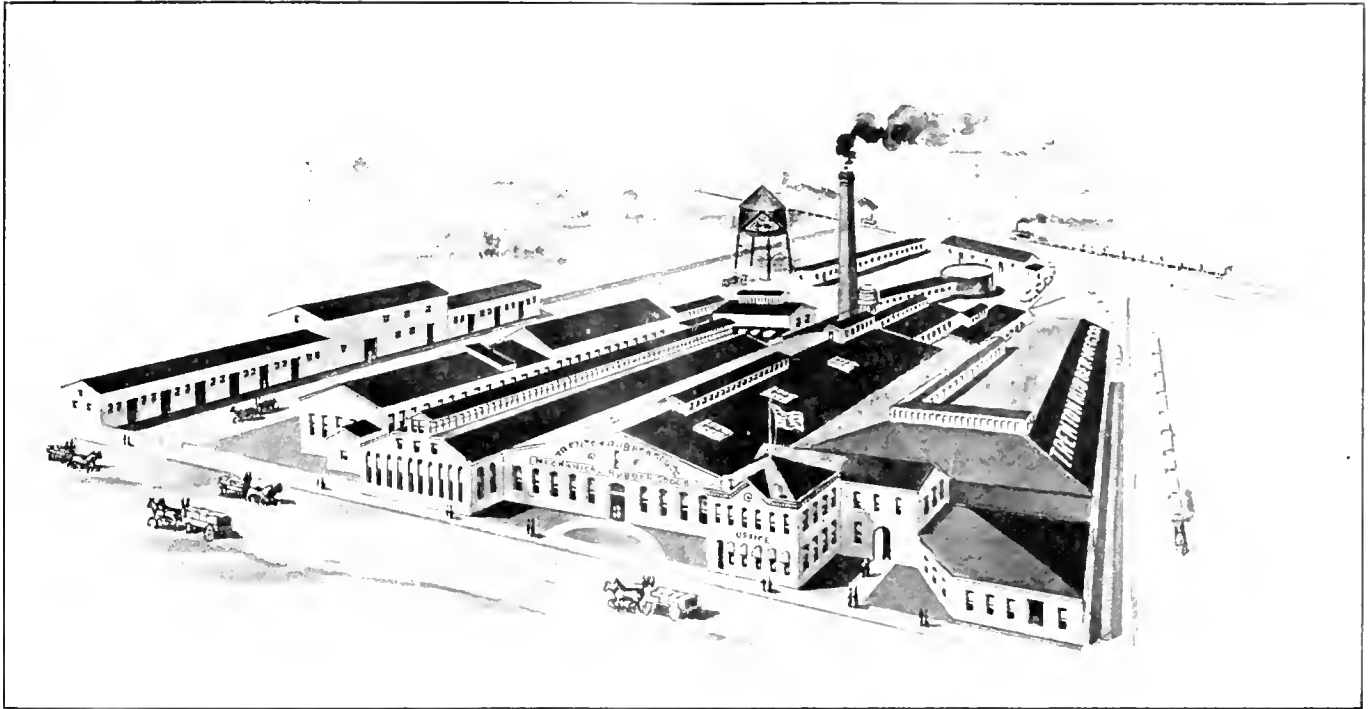
THE illustration herewith shows a new type of portable suction dust cleaner, for use on carpets, furniture and the like in offices, clubs, churches, hospitals and public buildings, as a substitute for the endless and heavy task of sweeping and dusting with ordinary facilities. The whole outfit is not more



PORTABLE SUCTION CLEANER.

than 3 feet high; weighs only 78 pounds, and is run by a small motor which can be attached in a moment to any electric light socket, or if desired it can be equipped for hand power. Being mounted on ball bearing casters, it can be removed readily from room to room. This new machine is supplied by the Dustless Cleaner Co., No. 39 West Twenty-first street, New York.

THE annual Agri-Horticultural Show of the Straits Settlements and Federated Malay States will be held this year at Kuala Lumpur, on August 10-12. The show was held last year at Kuala Lumpur, and was largely attended, not the least interesting feature being the exhibits of plantation rubber. Presumably rubber will be equally important this year.



Notable Changes at the "Trenton" Factory.

THE laboratory as an adjunct to the rubber factory is getting more and more to be an indication of progress. To be sure, many old and successful concerns get along very well without one, but every year their number lessens.

The installation of an up-to-date and fully equipped laboratory at the works of the Trenton Rubber Manufacturing Co. (Trenton, New Jersey) marks such a definite change of policy, and such an awakening to modern requirements, that our visit of investigation was the result. The history of the company has already appeared in THE INDIA RUBBER WORLD. A detailed sketch of the newly modeled factory, however, has not heretofore been written and is timely.

The plant is situated on the main line of the Pennsylvania railroad, quite near the magnificent new shops of that great corporation. Most of the buildings are of brick, one story, with monitor tops, affording plenty of light, and the floor space utilized amounts to something like 100,000 square feet. One of the most important things in a rubber mill, particularly in mechanical rubber good, is the water supply. The Trenton Rubber Manufacturing Co. are specially fortunate in this, having their own 8 inch pipe line to Assanpink creek, together with a large artesian well. They have for storage a 110,000 gallon tank, and a 25,000 gallon hot well, in which is stored the water from the calenders, grinders, and presses, for later use in the boilers. The power plant consists of a 350 HP. Corliss engine, a battery of 7 boilers amounting to 450 HP., together with dynamo for their own electric light plant, underwriters' pumps, and so on. As for rubber machinery, there are 15 mixers, and warmers, 4 calenders, one 30 foot belt press 72 inches wide, one 25 foot double deck press 50 inches wide, 3 double deck 40 inch presses, 2 double deck 30 inch presses, a battery of small screw presses, 4 tubing machines, together with machinery of special design for hose, belting and packings.

Under the new arrangement the business has been departmentized and is really an aggregation of separate plants for hose,

belting, and packing; specialties for the automobile trade, including inner tubes; "Therindor" brake lining; auto mats, and the like; a solid tire department containing five 30 foot vulcanizing molds; and a specialty department for small work such as horse-shoe pads. On the six acres of ground owned by the company are also their own machine shop, blacksmith shop, and carpenter shop, and a reclaiming plant with a capacity of about 5 tons of finished stock a day.

The offices are in a separate two story building, close to the factory proper, and connecting on the lower floor with the receiving and shipping rooms. The factory is thoroughly sprinkled throughout, has its own railroad siding, and, as the beginning of this article indicated, has lately built and equipped a fine



LABORATORY—TRENTON RUBBER MANUFACTURING CO.

laboratory. As a matter of interest to those who believe in laboratories, the general equipment consists, primarily, of a fire-proof building with plenty of light and with concrete floors. The interior is finished in white, with the exception of ebionized acid proof tables, which are black. For general equipment there is a ventilating apparatus with hoods for the removal of acid vapors, and the building is piped for gas, steam and compressed air, and wired for electricity.

To itemize the great variety of retorts and special vessels of glass, platinum, aluminum, and hard rubber would require a deal of space, and, indeed, it is more interesting to put emphasis, for example, upon such special contrivances as the solid concrete pile set deep in the earth to prevent vibration to which is attached the sensitive analytical balance. The illustration herewith shows only a part of the laboratory proper. Another portion of it not shown is that in which is now being installed experimental machinery, such as a small mixing mill, a dry heater, vulcanizer, press, and a specially strong steel vulcanizer for high pressures. A portion of the department is also reserved for special testing machines now being constructed.

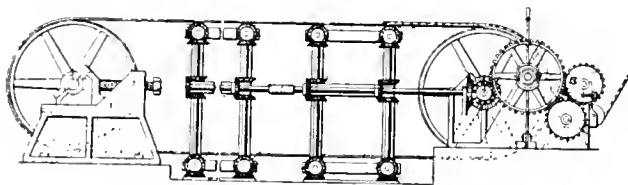
* * *

At the recent election of officers of the Trenton Rubber Manufacturing Co. the various positions were filled as follows: Joseph O. Stokes, president; William J. B. Stokes, treasurer; Frederick N. Hamerstrom, general manager; Francis C. Lowthrop, secretary; Fred S. Wilson, assistant secretary; Robert J. Stokes, superintendent. The following office appointments were made: J. Harry Thompson, office manager; Albert N. Numbers, manager mail order department; R. Sidney Woods, general auditor; L. T. Kuhl, credit man; James Driscoll, chief chemist.

NEW RUBBER FACTORY APPLIANCES.

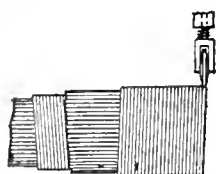
A FABRIC MAKING MACHINE.

AMONG the interesting inventions that have recently been filed in the United States patent office were two along the lines of fabrics for tires and hose. They are the joint inventions of Eugene D. C. Bayne and Lawrence A. Subers, of the Bayne-Subers Tire and Rubber Co., of Cleveland, Ohio. In the illus-



FABRIC MAKING MACHINE FOR TIRES AND HOSE.

trations herewith one shows the fabric-making machine which is, in brief, a movable table made up of a wide endless metal band that runs longitudinally over two large drums. Mounted upon this is a movable carriage that runs transversely over the band. The machine is fitted with the necessary gears, guide wheels, and the like, and is run by power. The second illustration shows the fabric produced by the machine. This fabric is composed of layers of threads, each strand being coated with rubber; the strands then being laid parallel so that the rubber surfaces touch and join, and when one longitudinal layer is finished a transverse layer is built upon it, the whole being then vulcanized. It is said under tests that the fabric shows wonderful strength. The patents are numbered 885,220 and 885,219, respectively, and dated April 21, 1908.

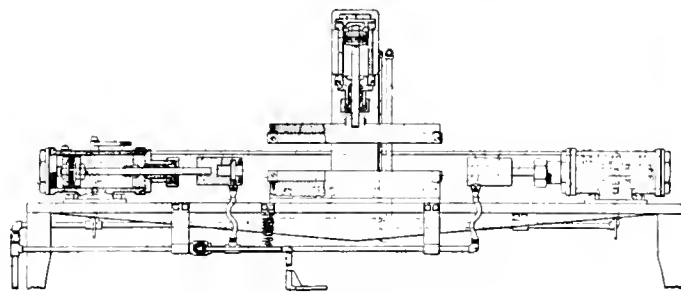


NEW TIRE FABRIC.

CAPPING THE ENDS OF HOSE.

The illustration herewith shows a very compact mechanism for capping the ends of rubber hose. It covers a means for

clamping and holding the hose on the mandrel, a cutting knife at the end of the clamps, a plunger chambered to admit the end of the mandrel, and means for admitting air

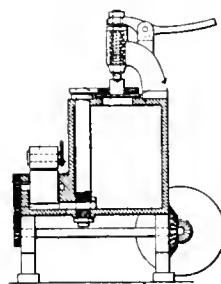


APPARATUS FOR CAPPING HOSE SECTIONS.

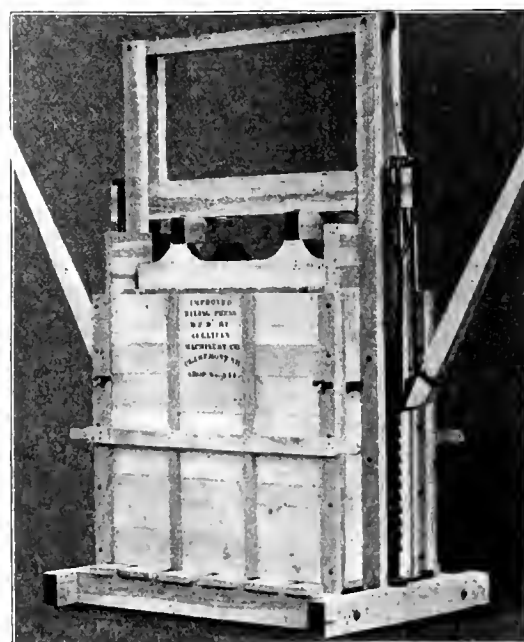
under pressure to the chambered end of the plunger which spreads outwardly the inner tube of the hose across the end of the knife. The invention is covered by patent No. 885,797, issued April 28, 1908, to Samuel J. Sill, assignor of one-half to Herbert H. Hewitt, both of Buffalo, New York.

A SHOE CEMENTING MACHINE.

In the manufacture of certain types of footwear cementing machines are coming more and more into use. Indeed, their application extends even further than the industry mentioned. In the illustration accompanying this is a simple type of cementing machine which comprises the usual reservoir and trough, through which the material to be cemented is led, feed opening ducts, etc., the whole arranged so that the supply of cement can be increased, diminished, or shut off almost instantly. This invention is covered by United States patent No. 885,862, issued April 28, 1908, to Charles W. Phipps and William J. Steele, of Northampton, England.



CEMENTING APPARATUS.



A NEW BALING PRESS.

[Used for baling scrap rubber and in some rubber factories for baling waste paper and pasteboard. Manufactured by the Sullivan Machinery Co., Claremont, New Hampshire.]

News of the American Rubber Trade.

NEW RUBBER FACTORY AT LOCKPORT.

A NEW mechanical rubber goods company has been incorporated as the Lockport Rubber Works, at Lockport, New York. The president of the company is Charles F. U. Kelly, widely known in connection with the rubber tire trade, having been in charge until recently of the tire sales of the Continental Rubber Works (Erie, Pennsylvania). The vice



CHARLES F. U. KELLY.
[President Lockport Rubber Co.]



J. EDWIN DAVIS.
[Vice President Lockport Rubber Co.]

president is J. Edwin Davis, who has had a long experience in the manufacturing and selling of mechanical rubber goods, having been for some years past in charge of this branch of the Continental works. Harry M. Wood, lately of Erie, Pa., is secretary of the new company. The Lockport Rubber Works is capitalized at \$300,000. It has leased property of the International Steam

Pump Co., known as the Holly plant, of which it will occupy for the present buildings containing floor space of over 110,000 square feet, and exceptionally well suited for the rubber manufacture. The company will have electric power from Niagara Falls as cheap or cheaper than any other in the country, and have been planning to have ready for operation by June 1 an outfit of machinery of the most modern make. The products will include belting, packing, hose, matting, molded goods, baby carriage tires, cycle tires, automobile tires, and tire tubes. The plant embraces a very complete laboratory for the inspection of all raw materials used and also for finished goods before shipment. The new company have taken pains to organize an efficient staff and have had encouraging indications of business in prospect.

AJAX-GRIEB COMPANY'S NEW FACTORY.

THE new factory of the Ajax-Grieb Rubber Co., at Trenton, New Jersey, was formally opened on May 11, when three carloads of representatives of the tire trade accepted the invitation of President Horace DeLisser to take part in the formalities. The company's branch managers were present, one coming from so far away as San Francisco. Among those who made addresses was the Hon. J. Franklin Fort, governor of New Jersey, who by pressing an electric button started the wheels of the factory. The building just opened is 60 x 180 feet and three stories high. The visitors were shown through the factory and entertained at luncheon, after which there was a vaudeville entertainment until the time of the departure of the special train for New York.

AITON MACHINE CO.—NEW CONNECTIONS.

THE Aiton Machine Co. (New York), have made connections with the Samuel L. Moore & Sons Corporation, Carl D. Bradley, president, of Elizabethport, New Jersey, for the manufacture and sale of Aiton machinery. The company will in the future solicit patronage in the name of the Samuel L. Moore & Sons Corporation. Thomas A. Aiton, vice-president of the Aiton Machine Co., will make his headquarters at the plant of the Moore corporation at Elizabethport. All business connected with the Aiton Machine Co. will receive his personal direction and supervision.

BALTIMORE HOUSE MAKES A CHANGE.

TILLINGHAST Rubber Co. (Baltimore, Maryland) have removed to a new location, No. 109 North Liberty street, where the amount of floor space occupied is three times as large as formerly. They have been established in Baltimore—being a branch of the Philadelphia firm B. C. Tillinghast—for 18 years, making steady progress all of this time. Since the Baltimore fire four years ago the business has increased rapidly. At present it is under the management of Mr. C. H. Friant, who was formerly with the Philadelphia house.

CHANGES OF LOCATION.

THE Swinehart Clincher Tire and Rubber Co. have removed their New York headquarters to larger premises, at No. 875 Seventh avenue. The Chicago branch has been removed to 1720 Michigan avenue.

The Massachusetts Tale Co. have removed their general offices from Boston to North Adams, Massachusetts, adjacent to their mills, with a view to facilitating the filling of orders.

Jenkins Brothers, manufacturers of the Jenkins rubber valves and packing, have removed their Chicago store to larger premises at No. 226-228 Lake street.

S. F. Hayward & Co. (New York), long important factors in the fire department supply business, have removed from No. 30 Warren street to No. 39 Park place.

MR. BROWN MAKES A CHANGE.

ONE of the best known of the younger men in crude rubber lines is Mr. Andrew H. Brown, who something like a dozen years ago came into the Boston office of the Boston Rubber Shoe Co. under the late A. H. Yeomans, and was not only exceedingly valuable but wonderfully liked as assistant in the purchasing department. About six years ago he was transferred to the New York office of the United States Rubber Co., where he very competently filled the position of assistant treasurer for the Gen-



ANDREW H. BROWN.

eral Rubber Co. With the first of May, however, he resigned that position, and as this issue goes to press will be connected with the New York crude rubber firm of A. T. Morse & Co. Very few young men in the trade have the following or the knowledge that Mr. Brown has acquired, and it is a very safe prediction that he will be successful in his new connection. By the way, THE INDIA RUBBER WORLD some years ago published a picture of Mr. Brown and Arthur W. Stedman taken at the time of their trip up the Amazon in search of india-rubber information.

A CORRECTION.

THE Motz Tire and Rubber Co. (Akron, Ohio) advise THE INDIA RUBBER WORLD that an error appeared in a reference to them in the May 1 issue (page 269). They state: "No restraining order has issued out of any court of the United States enjoining our company from manufacturing tires in the case. We are still manufacturing all of our catalogued tires, and especially our new non skid cushion tire."

A SPORTING GOODS DIRECTORY.

THE excellently edited *Sporting Goods Dealer*, of St. Louis, has brought out a Directory of The Sporting Goods Trade, a volume of 222 pages, in which are arranged under several hundred headings the names and addresses of manufacturers of and dealers in sporting goods of every class. This is the first attempt at a publication of this kind, and while the editor modestly disclaims completeness, no doubt most persons who see the book will be surprised at the amount of information which it contains. The price is \$1.

THE LATEST ELECTRIC SIGN.

MANY retail houses will appreciate a low priced, high grade, electric sign for outdoor use. Such a sign is made by the Hartford Electric Sign Co. (Hartford, Connecticut), which requires only two electric lamps, one on each side, to light it brilliantly, with interchangeable plates for face of sign, of white enameled

iron, which can be replaced with extra ones with different reading matter, when required. The frames are made of artistic bent Venetian iron, with substantial cold bent steel hanger and bracket. It is artistic as well as practical. This style sign can also be made non-electric, for use in places where electric current is not available.

TRADE NEWS NOTES.

THE number of shareholders in the United States Rubber Co. on April 30, 1908, is reported to have been about 4900, a gain of about 1200, compared with July, 1907.

The demand for tennis shoes is reported to be very satisfactory, and the factories making this line are running to full capacity.

The Hood Rubber Co. (Boston) are reported to be running a daily ticket of 30,000 pairs at their factory at East Watertown, with 2500 hands employed, which number it is expected will be largely increased before midsummer.

The Home Rubber Co. (Trenton, New Jersey) have sent to the offices of many of their friends in the trade a very neat desk accessory in the shape of a pad to go under an inkstand, made of their celebrated "N. B. O." black packing.

Owing to the death of Mr. R. H. Smith, president of the R. H. Smith Manufacturing Co. (Springfield, Massachusetts), reported on another page, the company have been reorganized by electing Henry M. Smith president, Arthur H. Rogers and Frank N. Chapin vice presidents, Henry T. Lorimer treasurer, and Frank A. Wakefield secretary. The company manufacture complete outfits for making rubber stamps, and also the "Springfield" motormeter.

The Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey) send out an attractive catalogue labeled "Big Game," devoted to illustrated descriptions of unusually large section hose and other goods in this line.

At the annual meeting of the Boston Rubber Shoe Co., on May 4, Harry E. Converse, C. C. Converse, Lester Leland, Samuel P. Colt, E. F. Bickford, John J. Watson, Jr., and Homer E. Sawyer were elected directors. Harry E. Converse was reelected president and Lester Leland treasurer.

The property of the United States Graphite Co. (West Chester, Pennsylvania) was sold at public auction by the referee in bankruptcy on May 7, for \$31,000, the purchaser being an attorney understood to represent T. Duncan Just, of No. 1215 Filbert street, Philadelphia.

The postmaster general has issued an order permitting the puncturing or perforating of postage stamps, for the purpose of identifying them, as has long been the practice of many British firms as a check against the embezzlement of stamps by dishonest employes and their theft by others. It is understood that this new regulation is due to the efforts of The Merchants' Association of New York, which has been agitating the matter for some time.

The directors of the Boston Woven Hose and Rubber Co. have declared a semi-annual dividend of \$3 per share on the preferred stock, payable June 15, 1908, to stockholders of record June 5.

The Niagara Rubber Co. (Lockport, New York), incorporated October 23, and for some time engaged in the manufacture of rubber tires and mechanical goods, have disposed of their machinery and for the present, at least, are not engaged in business.

The Seamless Rubber Co., in addition to inner tubes for tires, are making a number of other automobile accessories, including rubber gloves for automobilists, horn bulbs, and rubber lamp connections.

Mr. G. Edward Habich, for some time connected with George A. Alden & Co., has opened an office at No. 170 Summer street, Boston, and will hereafter visit the trade as a crude rubber broker. His many friends among the manufacturers will undoubtedly wish him the best of success.

NEW OWNER OF THE FACTORY AT RUTHERFORD.

The Rutherford Rubber Co., incorporated in New Jersey, January 10, 1908, have purchased from the receiver the plant owned formerly by The Electric Rubber Manufacturing Co., at Rutherford, N. J. It is stated that "this company, neither as individuals nor as a company, ever had any connection with the Electric company." The new company have begun the production of solid carriage tires and pneumatic tires and tubes, all under the trade name "Sterling." THE INDIA RUBBER WORLD is informed that the full amount of the capital authorized by the company's charter—\$300,000—has been paid in, but the organization at last accounts had not been completed. Charles Austin Bates, of No. 320 Fifth avenue, New York, is president of the company, and F. G. Mott, Jr., is vice president and general manager. The head office is at Rutherford, N. J.; there is a New York office at No. 253 West Forty-seventh street.

CHELSEA VERY MUCH ALIVE.

The Chelsea Manufacturers Association, starting with a membership of about forty and including manufacturers, bankers, and large taxpayers, has been formed with the idea of showing to the world that Chelsea, in spite of the great fire there in April, is far from being "dead." The 25 manufacturers who belong to the association are rated by a leading mercantile agency as having a capital of about \$8,000,000. Of the manufacturing firms who were injured by the fire only one has moved away so far, and they did not own their factory building. The immediate object of the association is to rebuild homes in Chelsea for the working people, to replace the great number destroyed by the fire. W. H. Gleason, of the Revere Rubber Co., is president; R. E. Bartels is treasurer, and F. H. Blaney secretary. The executive committee consists of William Martin (of T. Martin & Bro. Manufacturing Co., in the elastic webbing trade), chairman; R. E. Bartels, A. D. Bosson, A. G. Walton, and W. S. Forbes.

**A 42-INCH SUCTION HOSE.**

The very graphic illustration herewith shows a section of a 42 inch suction hose manufactured by the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey). The picture tells its own story and tells it mighty well, and the story is big work, good work, and good workmen.

SOME WASTE RUBBER IS DUTIABLE.

The importers at New York of certain goods which they sought to enter free of duty as scrap rubber, protested against its classification by the port collector as waste dutiable at 10 per cent., under paragraph 463 of the tariff act. The board of United States general appraisers held: "While it appears that the rubber in question was bought and sold as 'scrap,' it is also shown that some of the pieces could be used for patching rubber tires, and that the price of the merchandise found by the board

on reappraisalment is less than one-half that charged for new rubber tire stock." The action of the collector was sustained.

A NEW GOLF BALL.

MR. W. H. YULE, formerly of the Badger Brass Manufacturing Co., has been recently appointed manager of the golf ball department of The B. F. Goodrich Co. (Akron, Ohio). As a specialist in golf balls the young man is particularly enthusiastic about the Haskell-Whiz ball, which is the latest golf product. By a different method of winding, the ball is perfectly balanced, and the cover is so applied that uniformity, balance and accuracy are all there. These add long flight and accuracy on the putting green. Another excellent feature of the ball is a cover that is practically cut proof.

HOW DOES THIS DIFFER FROM GALILITH?

THE newspapers mention George V. Frye, of Mansfield, Ohio, as having produced from skim milk a substance which is impervious to acids, is unaffected by heat or cold, and is a high class electrical insulating material. The new substance has been named Omsite. It is reported to be the subject of patents, which cover an electrical treatment of the milk.

TRADE NEWS NOTES.

EDWARD B. PEARSON, for several years president and treasurer of the Tremont Rubber Co. (Boston), has become connected with the shoe jobbing house of Falconer, Lane & Co., in the same city, and will have charge of their sale of the Apsley Rubber Co.'s goods in New York and the New England states.

L. P. MacMichael, of the late firm of A. W. Brunn & Co., in the crude rubber trade, the dissolution of which was reported in the last INDIA RUBBER WORLD, is continuing in the business, at Nos. 2-4 Stone street, New York.

F. H. Appleton & Son have very largely increased their plant at Franklin, Massachusetts, and incidentally installed \$25,000 worth of new machinery. The selling force of the company has also been strengthened by the addition of Mr. Lloyd E. Appleton, nephew of the founder of the company.

The Mattson Rubber Co. (Lodi, New Jersey) announce the removal of their New York stock room to No. 161 Columbus avenue.

The bootmakers at the Fells factory of the Boston Rubber Shoe Co. have been transferred to the factory in Edgeworth, where all the bootmakers employed by the company will work hereafter.

An interesting fire drill is held each week at the factory of the Hartford Rubber Works Co. (Hartford, Connecticut), where an efficient brigade has been organized from the ranks of the employees, and apparatus provided by means of which water can be thrown to the topmost point of all the buildings.

Ernest R. Benson, who in December last resigned the position of secretary of the Hartford Rubber Works Co., has become sales manager of the Cadillac Motor Car Co. (Detroit, Michigan).

Ernest H. Brandt, some time New York manager for the Hartford Rubber Works Co., has been appointed general Eastern manager of the Cadillac Motor Car Co. (Detroit, Michigan), from which it is inferred that the Cadillac will establish a New York branch.

E. Bers & Co., scrap rubber merchants of Philadelphia and New York, are issuing an attractive series of picture postal cards showing views of Philadelphia, and incidentally calling attention to the growing line of business of this enterprising firm.

The Standard Gauge Manufacturing Co. (Syracuse, New York), makers of indicating gages for all purposes, have removed their New York branch to Room 1770, Hudson Terminal building, in order to obtain more spacious quarters. Their Western branch is located in the Monadnock building, Chicago.

NEW INCORPORATIONS.

THE Batavia Rubber Co., April 17, 1908, under the laws of New York; capital, \$70,000. Incorporators: Lewis Benedict and Augustus A. Smith, Attica, N. Y.; and Ashton W. Caney, Batavia, N. Y. On April 13 the property of the Sweet Tire and Rubber Co., at Batavia, was sold at public auction, preliminary to reorganizing the business, and the new company succeeds in control. The three incorporators named were all directors in the Sweet company, Mr. Caney having been such since its incorporation, in August, 1902. The old company was formed to make a solid vehicle tire patented by John M. Sweet. He left the company in 1905, and the company took on the manufacture of various kinds of tires, and have done a considerable volume of business.

Lockport Rubber Works, April 21, 1908, under the laws of New York; capital \$300,000. Incorporators: J. E. Davis and H. M. Wood, Erie, Pennsylvania; E. H. Seaman, Middleport, N. Y., and A. M. Steele, Lockport, N. Y. Further details are given on another page of this paper.

The F. A. Cigol Rubber Co., April 4, 1908, under the laws of New Jersey; capital, \$10,000. Incorporators: Frank A. Cigol, Henry Marelli, and Sanfilici Alexander, all of Paterson, N. J. The new company inform THE INDIA RUBBER WORLD that they have begun making rubber erasers and molded goods, supplying customers who practically take up their whole product. Mr. Cigol was one of the incorporators of the Laurel Rubber Co., formerly of Passaic, N. J., and later at Garfield, N. J., and for some years was their factory superintendent. The new company are located at Nos. 55-57 Albion avenue, Paterson.

John H. Parker Co., May 11, 1908, under the laws of Massachusetts; capital, \$35,000. Incorporators: John H. Parker, Charles L. Parker, and James E. Andrews, all of Malden, Mass. John H. Parker is president and treasurer; office No. 25 James street, Malden. Business, the manufacture of shoes, shoe findings, and waterproof garments, hitherto carried on by Mr. Parker.

The Pilgrim Rubber Co., April 18, 1908, under the laws of Massachusetts; capital, \$25,000. Incorporators: Arthur E. Denison, Cambridge; Arthur W. Denison, Newton; and W. Stanley Campbell, West Roxbury, Mass.

American Puncture Proof Tire Co., May 9, 1908, under the laws of Illinois; capital, \$60,000. To manufacture the Dykes puncture proof pneumatic tire. Incorporators: George E. Dixon, John L. G. Dykes, and Harold S. Osborne. It is intended to establish a factory in Chicago. Temporary address, First National Bank building.

Vacuum Insulating Co., May 11, 1908, under the laws of Maine; capital authorized, \$500,000. Incorporators: James E. Manter, Clarence E. Eaton, Charles D. Fullerton, and A. S. Conant, all of Portland, Maine.

American Insulating Co., May 11, 1908, under the laws of Maine; capital authorized, \$12,000. Incorporators: James E. Manter, Clarence E. Eaton, Charles D. Fullerton, and A. S. Conant, all of Portland, Maine.

RUBBER TIRES FOR NEW YORK FIRE DEPARTMENT.

THE fire commissioner of New York city lately advertised for bids, to be opened on April 30, for supplying about 14,620 pounds of solid rubber tire stock, of various dimensions, for use in the boroughs of Manhattan, The Bronx and Richmond. The details included 193 tires, in addition to 5 reels of light stock. The largest tires called for were 3 wired, No. 5 wire, 4 inch flat base. A contract for the above was awarded to The Diamond Rubber Co. (Akron, Ohio).

LA ZACUALPA PLANTATION NOTES.

LA Zacualpa Rubber Plantation Co. are experimenting on their estate in Chiapas, Mexico, with centrifugal machines in the handling of rubber latex in large quantities. The management have found that they can safely tap 10 months in the year, which

is a very desirable consideration. At latest accounts tappers were averaging 8 to 9 pounds a day of dry rubber or the equivalent in latex. The company plan to plant 2,000 acres in rubber this year, from seed.

TRADE NEWS NOTES.

THE "Kantleek" inner tubes for automobile tires, mentioned in the last INDIA RUBBER WORLD as being made by The Seamless Rubber Co. (New Haven, Connecticut), are distributed by the important sporting goods house of A. G. Spalding & Brothers (New York).

The United States Rubber Co. are now occupying their new Boston headquarters, at No. 140 Essex street, corner of Columbia. They are desirably located in the center of the shoe trade district, and the store and offices are admirable with regard to arrangement and appointments. The offices of the Boston Rubber Shoe Co. are also located here, and the offices of the American Rubber Co.

Eureka Fire Hose Manufacturing Co. (New York) issue a sheet of practical and excellent "Directions Concerning the Care of Fire Hose" designed to be posted in fire houses.

Work was resumed on May 11 at the boot factory of the Woonsocket Rubber Co., at Millville, Massachusetts. The "Alice" mill, at Woonsocket, was not opened on the same date, as was intended, on account of the delays involved in installing a large new engine, but is now active.

The offices of W. R. Brixey, the insulated wire manufacturer, have been removed from No. 203 Broadway, New York, to No. 30 Church street, in the Hudson Terminal buildings. Mr. Brixey's son R. D. Brixey acts as general manager of the business. Mr. Brixey is manufacturing a submarine cable 50 miles in length, to be laid along the route of the Panama canal.

The Hood Rubber Co. (Boston) were reported lately to be running full time for all the day employees, and to have put on a regular night force.

The Manhattan Rubber Manufacturing Co. (Passaic, New Jersey) have taken up the work of repairing automobile tires, which they are referred to as doing with a great deal of success.

Schedules in bankruptcy of Leon Rubay (corporation), dealer in tires and other automobile supplies, No. 1697 Broadway, New York, showed liabilities of \$25,186, and assets of \$19,562—cash, \$586; stock and fixtures, \$5,945; and accounts, \$13,031.

The Hartford Rubber Works Co. (Hartford, Connecticut), in order to keep pace with the orders received for Hartford tires, have been obliged to put on a night force.

The rubber footwear factory of L. Candee & Co. (New Haven, Connecticut), after a shutdown lasting from the middle of March, resumed work on May 4 on full time—10 hours a day.

The firm of Hagemeyer & Brunn (Produce Exchange annex, New York), importers of crude rubber since 1859, and whose members are Messrs. Paul Bertuch, Lincoln Brunn, and Ewart M. Brunn, desire to state that they have no connection whatever with any other firm or house in this line. Mr. A. W. Brunn, who is a rubber broker, although located in the same building, is not related to the Brunns of Hagemeyer & Brunn, nor has he ever been in any way connected with this firm.

The Manhattan Rubber Manufacturing Co. (Passaic, New Jersey) are opening a new branch—in New Orleans, at No. 204 Decatur street.

The Greenwald Rubber Co. (Buffalo, New York), of which Lemon Greenwald is manager, is a distinct organization from the Empire State Tire Co., incorporated in August, 1907, and which purchased the Greenwald internal protector for tires, which they are now manufacturing. Mr. Greenwald's new company will promote his other inventions.

"Fillen" is described as a composition of self vulcanizing rubber for prompt repairs of cuts, punctures, curb injuries and sand blisters on tires. It is made and sold by the Greenwald Rubber Co. (Buffalo, New York).

TRADE NEWS NOTES.

UNDER a ruling of the United States treasury department the Boston Belting Co., on the exportation of rubber covered rollers manufactured in part with the use of imported iron and steel rolls, will be allowed a drawback equal in amount to the duty paid on the imported materials, less 1 per cent.

The General Electric Co. have removed their New York offices from No. 44 Broad to 30 Church street, where they will occupy the seventeenth floor of one of the Hudson Terminal buildings.

The business of the Johns-Pratt Co. (Hartford, Connecticut), organized in 1886 to manufacture electrical insulating materials and steam packing from asbestos and india-rubber under the trade name of Vulcabeston, has steadily increased until it has become one of the important industries of the city, employing between 500 and 600 hands. The products are marketed by the H. W. Johns-Manville Co.

C. E. Conover Co., No. 101 Franklin street, New York, with a factory at Redbank, New Jersey, are marketing a new dress shield called the "Naiad," which is described as being transparent and capable of being laundered and sterilized.

The report of the Canadian General Electric Co. for the fiscal year ended December 31, 1907, shows gross profits of \$722,433, against \$855,675 for the preceding year.

High water mark in automobile tire product was reached at the factory of The Diamond Rubber Co. recently, when 900 tires were made and cured in one day. And still they are far behind their orders.

The Diamond Rubber Co. (Akron, Ohio), as an adjunct to their very complete insulated wire equipment, are installing a wire drawing plant, which will allow them to purchase copper in the ingot and draw all sizes of wire needed in their work.

The Archer Rubber Co. (Milford, Massachusetts) have leased quarters in a building adjoining their factory, with the purpose of extending their facilities. The new premises will accommodate 25 additional hands.

William H. Stiles has withdrawn from Robinson & Stiles (New York) and become established as a broker in crude rubber at No. 97 Water street.

PERSONAL MENTION.

MR. M. WACHTER, mentioned in THE INDIA RUBBER WORLD March 1, 1905 (page 209) as being well known in the United States as a factory superintendent in insulated wire work, and going then to accept a position with the Yokohama Insulated Wire Co., in Japan, was referred to recently in the *Times of Ceylon* as stopping at Colombo to study the plantation rubber situation, while on his way to Berlin to join the staff of the *Gummi-Zeitung*.

Mr. James F. Giles, of the American Hard Rubber Co. (New York), who is now in Europe, is expected to return about July 10.

Mr. Charles R. Flint, formerly so prominent in the rubber trade, is mentioned in the newspapers as having visited Mr. Thomas A. Edison at his laboratory in New Jersey, to introduce Mr. Wu Ting-fang, the Chinese minister at Washington, who is studying various American inventions and particularly the subject of aeroplanes.

Mr. R. E. Galleher, secretary of the New York Insulated Wire Co. (New York), who is touring Europe, is expected to return during July.

When this reaches the reader's eye, Mr. H. E. Raymond, vice president of The B. F. Goodrich Co. (Akron, Ohio), will be in London, on his usual annual European visit, and Mr. B. G. Work, president of the company, will be on the Atlantic, returning home after six weeks in England, Germany, and France.

A large reception was given by Mr. Augustus O. Bourn, Jr., at Hartley Hall, Columbia University, New York, on May 26, in celebration of the conferring of the degree of master of arts upon him by the faculty.

TRADE NEWS NOTES.

THE Artificial Rubber Co. was incorporated May 14, 1908, under the laws of Massachusetts, with a capital authorized of \$50,000. Incorporators: Charles E. Estey, president, Malden, Mass.; W. G. Burns, treasurer, Boston; and Julien E. Renton, Cambridge, Mass.

Dow Tire Co. (New York) have removed their offices from No. 104 West Forty-second street to Sixty-eighth street and Broadway.

The directors of the Manufactured Rubber Co. (Philadelphia) have declared the regular quarterly dividend of 1½ per cent. on the preferred stock, payable on June 1.

At the factory of the Goodyear Rubber Co., at Middletown, Connecticut, which had been closed for two weeks for general repairs, work was resumed on May 20, with the usual force and on full time.

The Apsley Rubber Co. will entertain at Hudson, Massachusetts, on June 6, a party from New York, embracing the members of the firms of Merritt, Elliott & Co., and Claflin, Thayer & Co., distributors of the Apsley Rubber Co.'s products, and the salesmen of these firms. Including the foreman of the various departments of the factory, at Hudson, there will be about 100 guests at the banquet to be given by President Apsley on the evening of the date mentioned.

The fire which destroyed the dismantled factory at Colchester, Connecticut, used formerly by the Colchester Rubber Co., mentioned on another page of this paper, is supposed to have been of incendiary origin. The loss is estimated at about \$40,000.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending May 23:

COMMON STOCK.

Week May 2	Sales	3,085 shares	High	21¾	Low	20½
Week May 9	Sales	9,200 shares	High	23½	Low	20¾
Week May 16	Sales	14,125 shares	High	26	Low	22½
Week May 23	Sales	15,620 shares	High	26½	Low	24½

For the year—High, 26½, May 18; Low, 17½, Feb. 26.
Last year—High, 52½; Low, 13½.

FIRST PREFERRED STOCK.

Week May 2	Sales	480 shares	High	83½	Low	82
Week May 9	Sales	1,220 shares	High	84¼	Low	83
Week May 16	Sales	5,100 shares	High	92	Low	84
Week May 23	Sales	3,400 shares	High	95	Low	91½

For the year—High, 95, May 16; Low, 76, Feb. 19.
Last year—High, 100½; Low, 61½.

SECOND PREFERRED STOCK.

Week May 2	Sales	... shares	High	..	Low	..
Week May 9	Sales	400 shares	High	52	Low	51
Week May 16	Sales	610 shares	High	57	Low	52½
Week May 23	Sales	2,000 shares	High	61	Low	60

For the year—High, 61¼, Jan. 23; Low, 42, Feb. 21.
Last year—High, 78½; Low, 39.

NEW TRADE PUBLICATIONS.

THE DIAMOND RUBBER Co. (Akron, Ohio) have issued a new catalogue of Mechanical Rubber Goods, which is even fuller in detail than its hitherto very complete catalogues, illustrating a number of articles which are shown in few or no other catalogues in the trade. Hard rubber goods are included. [5" x 7", 127 pages.]

TREMONT RUBBER Co. (Boston), so long prominent in the rubber footwear trade, have added a clothing department and send us their first catalogue of goods in this line. [3¾" x 6½", 26 pages.]

HAERISHAW WIRE Co. (New York) issue a Price List of National electrical code rubber covered wires and cables. Standard rubber insulated conductors, and other items. [4½" x 6¾", 35 pages.]

ALSO RECEIVED.

RUBBERTEX, Cloth and Paper Co., Logansport, Indiana=Rubbertex. 8 pages. Ionabond. 8 pages.
F. R. Parks Co., Grand Rapids, Michigan=Rubber Cement. 4 pages.

A RETIRED RUBBER MAN.

WHEN Mr. Henry C. Corson, vice president of The B. F. Goodrich Co., retired from active business, sold his beautiful home in Akron, and started out to spend the rest of his life in travel and study, the rubber trade lost one who had been for years a potent factor in its growth. Then when the news came of his sudden loss of vision, and the long course of treatment under Parisian specialists that followed, sorrow was as universal as is the gladness that now greets the news of his complete recovery from threatened blindness.

The larger part of Mr. Corson's career centers about the Goodrich company. Born in New Jersey, his early life was spent in travel—indeed, tradition says that he was for a time a sailor, then a newspaper man on a New York daily, later private secretary for a Carolina governor, and in 1881 stenographer, and secretary for the late Dr. Benjamin F. Goodrich. How he rose to be treasurer and vice president of the great company has many times been told. They still tell also in Akron of the wide range of his philanthropic work, of gifts of money and effort to church, society, city, and individual, and now that he is in company with his charming wife, carrying out his original plan of seeing the whole world with his own eyes, the warmest sort of God speed goes out to him from his many friends in the trade.



HENRY C. CORSON.

"RUBBER" MADE FROM PEAT.

THE editor of *The Car*, a London motoring journal of a high class, is Lord Montagu, whose acquaintance with automobiles and their use is not to be disputed. We do not know the extent of his familiarity with india-rubber, however, nor do we know for a fact that he is the author of this editorial paragraph from a recent number of his magazine:

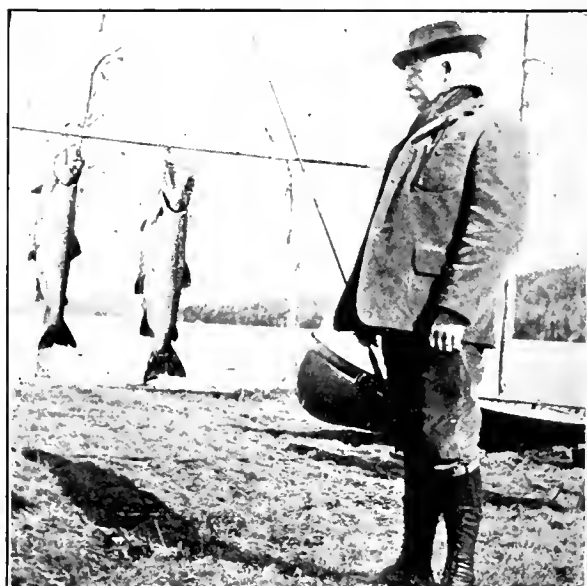
WHEN a friend brought me this week a piece of rubber manufactured from peat by a process which I am not at liberty at present to divulge, I cannot say that I was astonished—for everything is possible. But it makes one reflect how marvellous has been the progress of invention, and how nature is daily being imitated in various ways. All I can say about this rubber, a piece of which I have tested in every way, is that it presents the true features of rubber, that it is resilient, and that one cannot imagine anything more like rubber than this rubber itself—even to the smell. Whether it will stand wear and tear when incorporated in tires on the road is another point, and this question can only be answered by actual use. But I may mention that one or two of the greatest experts in the rubber trade have declared that commercially and structurally it is indistinguishable from the product of *Ficus elastica*. I am told that it will cost about one-fourth the price of rubber. If it stands further tests to be made, and can be manufactured in commercial quantities, it may in time displace the natural commodity.

MR. BALLOU GOES FISHING.

FOR a long time there has been a well founded suspicion among rubber men that Mr. Walter S. Ballou, president of The Joseph Banigan Rubber Co. and member of the executive committee of the United States Rubber Co. was fond of fishing. There has also been a prevailing idea that there are fine fish all over New England that are waiting expressly for Mr. Ballou to come along, refusing to rise to anybody else.

This idea seems to have been amply corroborated by the result of a four days' fishing trip that Mr. Ballou, in company with Mr. Horace C. Pratt, president of the Amsterdam Rubber Co., of New York, took early in May. They struck for Washington county, Maine, which is the most easterly piece of land in the United States. They took the Maine Central road and disembarked at Forest Station, and then did 14 miles through the woods to Topsfield.

The fishing season in Maine opens when the ice runs out of the rivers. The ice very accommodatingly ran out of the river



MR. BALLOU'S FINE CATCH.

the day before their arrival. They had heard that there were some land-locked salmon, or as the Indians call them "Ouiananische," in Musquash lake, which is close to Topsfield. Evidently the report was fairly correct, for inside of two hours Mr. Ballou had landed three separate and distinct ouiananisches, the first one weighing 6¾ pounds, the second 9 pounds, and the third 8½ pounds.

The picture shown here is a snapshot taken by the guide (who mingles art with sport-manship) of Mr. Ballou viewing with a look of warrantable satisfaction the 6¾ and the 9 pounders. In addition to fishing in the lake, they tried for some square tailed brook trout in the brook that feeds the lake, and there Mr. Ballou also made a record with a 6½ pounder. Mr. Pratt also met with phenomenal success, but the heaviest weights all rose to Mr. Ballou.

They stopped at "The Birches," an ideal place for fishermen, conducted by Mr. Mahar in Topsfield, and if the proprietor of that place isn't compelled next season to store away his guests six in a room, with cots on the roof, it will not be due to any lack of advertising on the part of Mr. Ballou and Mr. Pratt.

A RECENT importation at Denver, Colorado, of safety fuse was claimed by the importer to be composed in chief value of cotton, but the collector declared the chief value to be in gutta-percha, and was sustained by the general appraisers.

FIRE HOSE FOR NEW YORK.

SEALED proposals for supplying an important amount of fire hose were received by the fire commissioner of New York city up to May 14, and contracts were awarded in consequence for 71,500 feet. The details are embraced in the following summary of contracts for supplying the city with fire hose made since January 1:

FOR MANHATTAN BOROUGH.

30,000	feet 2½ inch rubber hose—The Republic Co., \$1.64 per foot.....	\$49,200
30,000	feet 3 inch (high pressure) rubber hose—The Diamond Rubber Co.; \$1.73½ per foot.....	\$52,050
20,000	feet 3 inch rubber hose—The Republic Rubber Co., \$1.54 per foot.....	\$30,800
7,000	feet 3½ inch rubber hose—The B. F. Goodrich Co., New York; \$2.20 per foot.....	\$15,400
3,000	feet 3 inch rubber hose—The Republic Rubber Co., \$1.64 per foot.....	\$4,920
26,000	feet 2½ inch rubber hose—The Republic Rubber Co., \$1.14½ per foot.....	\$29,770
5,000	feet 1½ inch rubber hose—The B. F. Goodrich Co., New York; 68 cents per foot.....	\$3,400
121,000		\$205,820

FOR BROOKLYN BOROUGH.

10,000	feet 2½ inch rubber hose—The Diamond Rubber Co., \$1.13½ per foot.....	\$11,350
10,000	feet 3 inch (high pressure) rubber hose—The Republic Rubber Co.; \$1.64 per foot.....	\$16,400
3,000	feet 3½ inch rubber hose—The B. F. Goodrich Co., New York; \$2.20 per foot.....	\$6,600
7,500	feet 3 inch rubber hose—The Republic Rubber Co.; \$1.64 per foot.....	\$12,300
25,000	feet 2½ inch rubber hose—The B. F. Goodrich Co., New York; \$1.17 per foot.....	\$29,250
5,000	feet 1½ inch rubber hose; 68 cents per foot.....	\$3,400
60,500		\$79,300

For purposes of comparison the following table is introduced, showing the amount of fire hose of all kinds received by the city, the dates in the first column relating to the years in which the hose was bid on, rather than the dates delivered:

YEAR.	Cost to City.	Length in Feet
1904.....	\$78,785.25	92,500
1905.....	74,000.00	76,500
1906.....	96,258.00	\$3,100
1907.....	11,000.00	11,000
1908 (to date).....	247,600.00	181,500

The advertisement for bids to be opened on May 14 specified several items of cotton fire hose, but no estimates were received for this class of goods. There were specified 2500 feet of 3 inch and 10,000 feet of 2½ inch cotton hose for Brooklyn borough, and 1500 feet of 3 inch and 6000 feet of 2½ inch cotton hose for Manhattan—a total of 23,000 feet.

OBITUARY.

SAMUEL F. RANDOLPH, JR., died on May 21, at his residence in New York, after a brief illness, in his thirty-third year. He commenced his business career as a salesman of mechanical rubber goods for the Commonwealth Rubber Co. (New York) in 1895, when he was 20 years of age. In 1897 he entered the employment of the Diamond Rubber Co., in which his ability as a salesman was recognized and secured for him rapid promotion, until he became the manager of the Diamond Rubber Co. in the Eastern states. He resigned this position in 1905, attracted by the possibilities in the automobile business, and formed the Metropolitan Auto Co., of New York. Selling out his interest in this company in May, 1906, he took up an invention for ventilated cushions, formed a company to hold the patent rights and manufacture the springs, and then, having demonstrated the commercial success of the invention, organized a selling company called the Randolph-Edwards Co. This company became the selling agent for the springs, and for a number of other accessories of automobiles and Pullman cars. At the time of his death he was the president of the Randolph-Edwards Co. Mr. Randolph was the son of Samuel F. Randolph, long connected with the rubber goods trade and now identified with the automobile interest in New York.

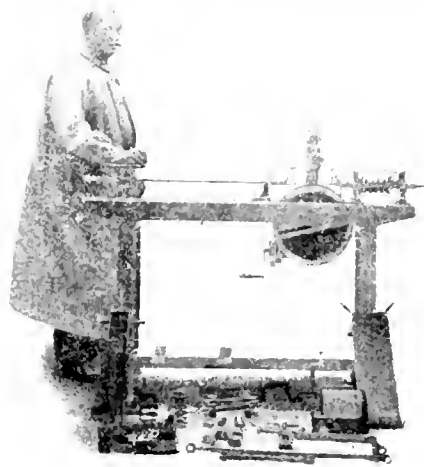
* * *

RICHARD HALE SMITH, president and treasurer of the R. H.

Smith Manufacturing Co. of Springfield, Mass., president and chairman of the board of public works of that city, died on May 12, in his sixty-third year. Mr. Smith was born at Chelmsford, Mass., and built up an extensive business in rubber stamps, and particularly in vulcanizers and other apparatus for the stamp trade. He was a veteran of the civil war and a member of the Masonic fraternity.

THE "P. B." DYNAMOMETER.

IN an earlier issue of this journal (Sept. 1, 1907, page 382) was described the very ingenious "P. B." dynamometer, French invention, designed particularly for testing rubber, but adapted also for numerous uses. The device has attracted wide attention and, it is understood, has been installed in a number of important rubber factories. The dynamometer is shown in the illustration.



"P. B." DYNAMOMETER.

employed for tensile tests on india-rubber or fabric; for compression tests, for carrying out tests by means of repeated bending, and for abrasion tests. The person standing next to the apparatus in the illustration will render clear by comparison the dimensions of the latter. The dynamometer is exploited by A. D. Cillard, fils, at 40, rue des Vinaigriers, Paris. The New York address is The Monolith, an important new office building.

Dr. Walther Thiel has severed his connection with the Vereinigte Gummiwaren-Fabriken Harburg-Wien. After having taken his degree in Leipzig, and becoming a fellow of the Institute of Great Britain and Ireland, he was for several years connected with Oxford University. Since 1896 he has been engaged in the rubber trade, both in England and Germany, where he has accumulated a thorough knowledge of rubber and the rubber manufacture. In all probability he will be heard from in the United States, and we wish him every success in his future ventures.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show an advance, as compared with last month:

Old rubber boots and shoes—domestic.....	63½ @ 7
Old rubber boots and shoes—foreign.....	6 @ 63½
Pneumatic bicycle tires.....	6 @ 61½
Automobile tires.....	6 @ 61½
Solid rubber wagon and carriage tires.....	7 @ 8
White trimmed rubber.....	101½ @ 11
Heavy black rubber.....	41½ @ 42½
Air brake hose.....	33½ @ 4
Garden hose.....	2 @ 2½
Fire and large hose.....	23½ @ 15½
Matting.....	21½ @ 15½

Review of the Crude Rubber Market.

A DECIDED advance in rubber prices has taken place in all markets, the quotations at this date being the highest of the year, so far. All accounts agree that buying at primary markets for American account has been much more active of late. The automobile tire industry in the United States has been exceptionally active this season, calling for enough rubber to influence market conditions materially. The resumption of work by the rubber footwear factories, after an unusually long period of shutting down, has also stimulated the demand for raw material. The extent of work in the other branches of the American rubber industry still remains below normal, however, and a disposition toward caution seems likely to prevail until the political situation becomes clearer, this being a presidential election year.

At the monthly sale in Antwerp on May 21 decided advances were realized over the brokers' estimation, the average gain being about 75 centimes per kilogram (about 6 2-3 cents per pound).

Arrivals of rubber of all kinds at Pará for the crop year are still much smaller than last year, though in excess of the figures for any season prior to 1906-07. The figures are 33,185 tons to May 18, 1908, against 36,505 tons to the end of May, 1907, and 32,840 tons to May 31, 1906.

R. O. Ahlers & Co., of Pará, report May 11: "Since our last reports the market has steadily risen, and as European buyers only seemed to be interested in seeing prices rise, without buying much, nearly all purchases have been made for American account. Entries continue moderate, and in many places work is stopped on account of the extremely high water in all the tributaries."

Following are the quotations of New York for Para grades one year ago, one month ago, and May 29, the current date:

PARA.	June 1, '07.	May 1, '08.	May 29.
Islands, fine, new.....	110 @ 111	79a/80	89a/90
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	112 @ 113	83a/84	92a/93
Upriver, fine, old.....	114 @ 115	85a/86	94a/95
Islands, coarse, new.....	62 @ 63	43a/44	46a/47
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	87 @ 88	58a/59	64a/65
Upriver, coarse, old.....	none here	none here	none here
Cacho (Peruvian), sheet	71 @ 72	45a/46	49a/50
Cacho (Peruvian), ball..	83 @ 84	56a/57	61a/62
Ceylon (Plantation), fine sheet	134 @ 135	87a/88	102a/103

AFRICAN.

Sierra Leone, 1st quality..	74a/75	Lopori ball, prime.....	78a/79
Massai, red.....	74a/75	Lopori strip, prime.....	66a/67
Benguella.....	48a/49	Madagascar, pinky.....	67a/68
Aceira flake.....	15a/16	Ikelemba.....	none here
Cameron ball.....	47a/48	Soudan niggers.....	54a/55

CENTRALS

Esmeralda, sausage.....	62a/63	Mexican, scrap.....	61a/62
Guayaquil, strip.....	46a/47	Mexican, slab.....	44a/45
Nicaragua, scrap.....	59a/60	Mangabeira, sheet.....	47a/48
Panama.....	44a/45	Guayule.....	20a/20

PARA RUBBER VIA EUROPE.

APRIL 21.—By the <i>Lucania</i> —Liverpool	PORTS.	May 1. By the <i>Lucania</i> —Liverpool	May 1. By the <i>Lucania</i> —Liverpool
W. L. Gough Co. (Fine).....	4,500	New York Commercial Co. (Fine).....	25,000
APRIL 21.—By the <i>Cyprien</i> —Hamburg		New York Commercial Co. (Fine).....	24,000
New York Commercial Co. (Fine).....	74,000	APRIL 21.—By the <i>Lucania</i> —Hamburg	
Robinson & Stiles (Coarse).....	25,000	New York Commercial Co. (Fine).....	120,000
APRIL 21.—By the <i>Cyprien</i> —Hamburg		New York Commercial Co. (Fine).....	11,500
New York Commercial Co. (Fine).....	32,000	May 1. By the <i>Lucania</i> —Hamburg	
W. L. Gough Co. (Coarse).....	5,000	New York Commercial Co. (Fine).....	13,500
APRIL 21.—By the <i>Lucania</i> —Hamburg		New York Commercial Co. (Coarse).....	6,000
W. L. Gough Co. (Coarse).....	10,000	W. L. Gough Co. (Fine).....	2,000
May 1. By the <i>Lucania</i> —Hamburg			
G. Amsnick & Co. (Fine).....	2,500		
G. Amsnick & Co. (Coarse).....	2,500		

EAST INDIAN.

Assam.....	75a/76	Borneo.....	26a/27
		Per Kilo.....	
Late Pará cables quote:		Upriver, fine.....	58025
Per Kilo.....		Upriver, coarse.....	38225
Islands, fine.....	48300	Exchange.....	15 7/32d.
Islands, coarse.....	428100		
Latest Manáos advices:			
Upriver, fine.....	58350	Exchange.....	15 5/32d.
Upriver, coarse.....	38350		

NEW YORK RUBBER PRICES FOR APRIL (NEW RUBBER).

	1908.	1907.	1906.
Upriver, fine.....	78a/84	1.15@1.18	1.25@1.28
Upriver, coarse.....	55a/58	.91a/.94	.92a/.95
Islands, fine.....	75a/80	1.14@1.16	1.22@1.25
Islands, coarse.....	42a/44	.69a/.68	.70a/.74
Cametá.....	44a/48	.71a/.72	.72a/.76

Antwerp.

At the regular monthly inscription sale, on May 21, the offerings amounted to about 332 tons. Some of the lots, with the brokers' estimations (in francs per kilogram), were:

16,281 kilos Upper Congo Mongala.....	5.25
21,023 " Upper Congo Mongala.....	4.00
21,699 " Upper Congo Mongala.....	4.25
22,886 " Upper Congo Arawimi.....	5.50
10,376 " Upper Congo Arawimi.....	3.75
22,261 " Upper Congo ordinary.....	6.95
10,346 " Upper Congo Equateur.....	4.00
13,182 " Congo Kasai-Louanda II. grade.....	5.50
4,970 " Straits plantation.....	7.50@10.25
23,080 " Guayule.....	2.35
[Equal to 2 1/2 cents per pound.]	
4,250 kilos Soudan niggers.....	5.75

The offerings included two small lots for account of the American Congo Co.

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]					
APRIL 27. By the <i>Dunstan</i> , from Manáos and Pará:		FINE, MEDIUM, COARSE.		CAUCHO.	
IMPORTERS.					
New York Commercial Co.	62,000	27,000	42,000	147,000	270,000
General Rubber Co.	118,000	26,100	95,300	1,900	241,300
A. T. Morse & Co.	6,000	3,700	2,200	110,200	122,100
Edmund Reeks & Co.	3,800	.....	15,200	67,000	84,000
Poel & Arnold.....	.....	6,800	41,800	24,800	73,400
Wm. E. Peck & Co.	5,700	.....	11,200	.....	16,900
Hagemeyer & Bunn.....	11,800	.....	24,500	.....	36,300
TOTAL.....	206,000	63,600	233,100	350,900	853,600
May 2.—By the <i>Martinez</i> , from Manáos and Pará:					
General Rubber Co.	98,700	20,000	52,000	800	172,400
New York Commercial Co.	45,400	8,600	38,500	42,100	134,600
Poel & Arnold.....	5,000	700	35,200	61,700	102,600
A. T. Morse & Co.	.....	.....	33,900	2,500	46,400
C. P. dos Santos.....	.....	.....	30,500	.....	30,500
Wm. E. Peck & Co.	16,100	.....	10,000	.....	26,700
Hagemeyer & Bunn.....	12,100	4,900	3,300	.....	20,000
Edmund Reeks & Co.	6,200	400	2,600	.....	9,800
TOTAL.....	184,100	34,300	217,500	107,100	543,000
May 15.—By the <i>Sergipe</i> from Pará:					
Lawrence Johnson & Co.	41,800	12,100	11,100	7,500	72,500
May 15.—By the <i>Cyprien</i> from Manáos and Pará:					
New York Commercial Co.	28,700	9,100	50,800	502,300	596,000
A. T. Morse & Co.	150,000	45,500	99,100	11,700	313,200
General Rubber Co.	140,500	31,300	108,500	4,000	284,300
Poel & Arnold.....	30,200	11,000	36,200	73,800	151,200
Hagemeyer & Bunn.....	13,200	.....	10,800	.....	33,000
C. P. dos Santos.....	.....	.....	47,700	10,700	58,400
Wm. E. Peck & Co.	16,700	.....	15,800	.....	20,500
Edmund Reeks & Co.	4,000	.....	11,200	.....	15,800
TOTAL.....	384,800	96,000	395,100	602,500	1,479,300

May 13. By the <i>Etruria</i> —Liverpool	
New York Commercial Co. (Fine).....	22,500
May 16.—By the <i>Lucania</i> —Liverpool:	
General Rubber Co. (Fine).....	185,000
Robinson & Stiles (Coarse).....	3,500
May 20. By the <i>Mesaba</i> —London:	
General Rubber Co. (Fine).....	80,000
May 21.—By the <i>Carmania</i> —Liverpool:	
New York Commercial Co. (Fine).....	150,000
New York Commercial Co. (Coarse).....	40,000
A. T. Morse & Co. (Fine).....	34,000
General Rubber Co. (Fine).....	28,000
May 22.—By the <i>Lucania</i> —Liverpool:	
New York Commercial Co. (Fine).....	85,000
General Rubber Co. (Fine).....	38,000
May 22. By the <i>Waldsee</i> —Hamburg:	
New York Commercial Co. (Fine).....	15,000

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it **does not blow under cure.**

WRITE FOR PRICES.

Massachusetts Chemical Co.
WALPOLE, MASS.

Operates Walpole Rubber Works; Walpole Varnish Works.

SYNTHETIC ARYAN ELECTRICIAN ON RUBBER.

[FROM THE "INDIA REVIEW."]

MR. C. S. NARAYANASWAMY ALVAR, electrician of Triplicane, Madras, writes to us:

"The rubber expert in the Encyclopædia Britannica, writing on the subject of gutta-percha, bemoans the loss of the gutta-percha as they are being felled down and destroyed every year by some tens of thousands. You say that T. C. Bridges says that there is a colossal fortune awaiting the inventor who would find out a perfect substitute for india-rubber or gutta-percha.

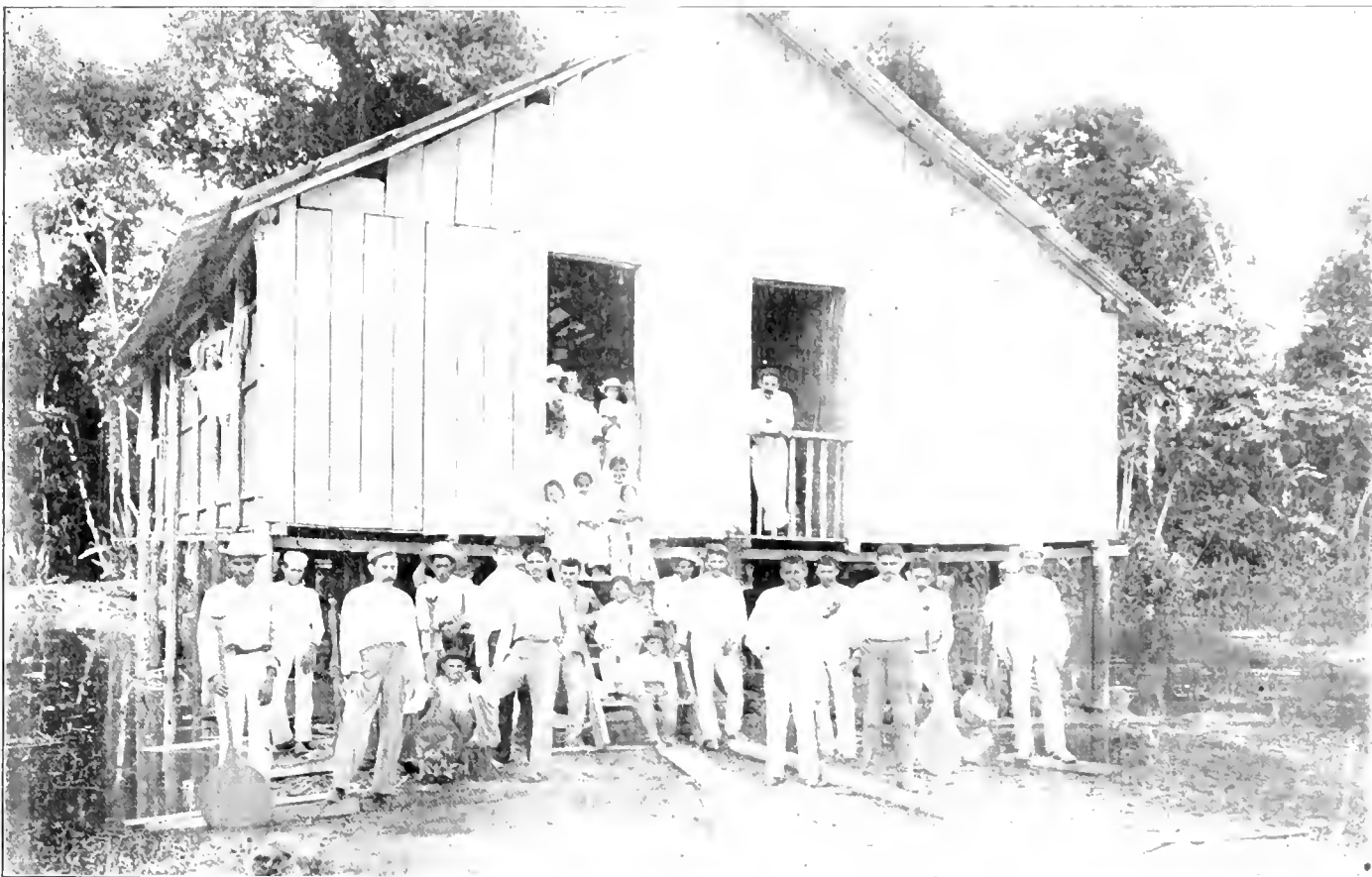
"Well, sir, in my experience as a research student in synthetic Aryan chemistry, I have come by the result that either rubber or gutta-percha is precipitated from many of the milk giving indigenous, spontaneous, wild growing plants of the many of the *Euphorbiaceæ*, *Asclepiadææ* and *Urticacææ* genus. To whomsoever

ever it may be of interest to make out a commercial paying business, I am prepared to demonstrate the same."

BRIEF MENTION.

Exports of balata from British Guiana during the first quarter of 1908 were 88,504 pounds, against 100,605 pounds same period last year. Rubber exports increased from 1,225 to 1,043 pounds.

Mr. H. A. Wickham, who was sent out from the Kew Gardens in 1876-77 to Brazil, to secure seeds of the *Hevea Brasiliensis* for introduction into the Far East—which work resulted in the establishment of rubber culture in Ceylon and Malay—appears not to have lost his interest in rubber. The *Malay Mail* reports that the state council of Selangor has approved his application for a patent on "an apparatus for curing india rubber."



RUBBER BARRACKS, BOCCO DO ROSINHO DA LIBERDADE, ON THE RIO JURUA, BRAZIL.

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is dead, dirty and sticky, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has life, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

CENTRALS.

APRIL 21.—By the <i>Byron</i> =Bahia:	
Poel & Arnold.....	20,000
New York Commercial Co.....	11,500
APRIL 21.—By the <i>El Siglo</i> =Galveston:	
Edward Maurer.....	22,500
APRIL 22.—By the <i>Boric</i> =Liverpool:	
Poel & Arnold.....	11,500
APRIL 23.—By the <i>Momus</i> =New Orleans:	
A. T. Morse & Co.....	3,500
Eggers & Heinlein.....	1,500
G. Amsinck & Co.....	1,000
K. Mandell & Co.....	1,000
APRIL 23.—By the <i>Financé</i> =Colon:	
Meyer Hecht.....	7,000
G. Amsinck & Co.....	5,500
W. R. Grace & Co.....	3,500
A. Rosenthals Sons.....	1,500
New York & Mexican Co.....	1,000
Roldan & Van Sickle.....	1,000
APRIL 27.—By the <i>Esperanza</i> =Colon:	
J. Brandon & Bros.....	7,500
Hirzel, Feltmann & Co.....	1,000
APRIL 25.—By the <i>Mar Castle</i> =Frontera:	
Harburger & Stack.....	7,000
Strube & Ulze.....	2,500
E. Steiger & Co.....	2,500
Graham Hinkley Co.....	2,500
American Trading Co.....	1,500
H. Marquardt & Co.....	1,500
En Transit.....	2,500
APRIL 27.—By the <i>Pagilancia</i> =Tampico:	
Continental-Mexican Rubber Co.....	27,500
Edward Maurer.....	19,000
APRIL 27.—By the <i>Zulu</i> =Manakibo:	
R. Gallego & Co.....	4,000
Silvia & Bando.....	1,500
MAY 1.—By the <i>El Dia</i> =Galveston:	
Continental-Mexican Rubber Co.....	35,000
MAY 2.—By the <i>Mexico</i> =Frontera:	
Harburger & Stack.....	9,000
E. Steiger & Co.....	2,000
H. Marquardt & Co.....	1,000
MAY 4.—By the <i>Cedifugas</i> =Tampico:	
Remsch & Held.....	34,500
Edward Maurer.....	11,000
Flint & Co.....	4,000
MAY 4.—By the <i>Aizana</i> =Colon:	
Hirzel, Feltmann & Co.....	2,000
Meyer Hecht.....	2,000
Wessels & Kulekamp.....	1,500
Dumarest Bros.....	1,500
Roldan & Van Sickle.....	1,000
Andreas & Co.....	1,000
C. Bernheim & Co.....	1,000
MAY 6.—By the <i>El Alba</i> =Galveston:	
Continental-Mexican Rubber Co.....	35,000
MAY 6.—By the <i>Joachim</i> =Cartagena:	
Kunhardt & Co.....	5,000
Roldan & Van Sickle.....	2,500
American Trading Co.....	1,500
Isaac Brandon & Bros.....	1,500
MAY 6.—By the <i>Palasquez</i> =Bahia:	
Poel & Arnold.....	34,000
New York Commercial Co.....	22,500
J. H. Rossback Bros.....	4,500
MAY 8.—By the <i>El Valle</i> =Galveston:	
Continental-Mexican Rubber Co.....	27,500
MAY 7.—By the <i>Panama</i> =Colon:	
G. Amsinck & Co.....	3,000
Piza, Nephews & Co.....	2,500
Dumarest Bros.....	2,500
Columbian Tradg. Co.....	1,000
Hirzel, Feltmann & Co.....	1,000
W. R. Grace & Co.....	1,000
Eggers & Heinlein.....	1,000
L. Johnson & Co.....	1,000
MAY 11.—By the <i>El Siglo</i> =Galveston:	
Continental-Mexican Rubber Co.....	27,500
MAY 11.—By the <i>Seneca</i> =Vera Cruz:	
American Trading Co.....	2,000
H. Marquardt & Co.....	1,000
In transit.....	1,000
MAY 12.—By the <i>Buyamo</i> =Tampico:	
New York Commercial Co.....	175,000
Edward Maurer.....	110,000
Poel & Arnold.....	9,000
H. Marquardt & Co.....	2,500
E. N. Tibbals & Co.....	3,500
MAY 12.—By the <i>Alliance</i> =Colon:	
W. R. Grace & Co.....	3,500
Hirzel, Feltmann & Co.....	3,000
American Trading Co.....	1,500
A. D. Straus & Co.....	1,000
MAY 14.—By the <i>Momus</i> =New Orleans:	
A. N. Rotholz.....	2,500
Manhattan Rubber Mfg. Co.....	1,000
G. Amsinck & Co.....	1,000
K. Mandell & Co.....	1,000
MAY 16.—By the <i>Merida</i> =Frontera:	
Harburger & Stack.....	8,000
E. Steiger & Co.....	7,500
American Trading Co.....	3,000
H. Marquardt & Co.....	1,000
E. G. Pbister.....	1,000

POUNDS.	
MAY 18.—By the <i>Crown Prince</i> =Bahia:	
New York Commercial Co.....	13,500
Poel & Arnold.....	11,000
A. D. Hitch & Co.....	11,000
A. Hersch & Co.....	0,000
MAY 18.—By the <i>Financé</i> =Colon:	
Meyer Hecht.....	4,000
G. Amsinck & Co.....	2,500
Dumarest Bros.....	2,500
George A. Alden & Co.....	2,000
MAY 18.—By the <i>Comus</i> =New Orleans:	
A. T. Morse & Co.....	1,500
United Fruit Co.....	1,000
A. Rosenthals Sons.....	1,000
MAY 18.—By the <i>El Sid</i> =Galveston:	
Continental-Mexican Rubber Co.....	27,500
MAY 18.—By the <i>Pretoria</i> =Hamburg:	
George A. Alden & Co.....	10,000
MAY 19.—By the <i>Tennyson</i> =Bahia:	
Poel & Arnold.....	22,500
A. D. Hitch & Co.....	10,000
MAY 19.—By the <i>Carib II</i> =Lauzillo:	
Eggers & Heinlein.....	3,000
H. W. Peabody & Co.....	1,000
MAY 20.—By the <i>Prins Willem</i> =Colon:	
A. Santos & Co.....	2,000
Fred Probst & Co.....	1,000
G. Amsinck & Co.....	1,000
J. Brandon & Bros.....	1,000
MAY 22.—By the <i>Sigmond</i> =Columbia:	
G. Amsinck & Co.....	2,500
Graham Hinkley Co.....	2,500
Eggers & Heinlein.....	1,000
A. Held.....	500
*This sign, in connection with imports of Centrals, denotes Guayule rubber.	
AFRICANS.	
APRIL 22.—By the <i>Stam</i> =Liverpool:	
Poel & Arnold.....	46,000
APRIL 21.—By the <i>Carmania</i> =Liverpool:	
General Rubber Co.....	28,000
George A. Alden & Co.....	18,000
Poel & Arnold.....	7,000
APRIL 25.—By the <i>Lincoln</i> =Hamburg:	
A. T. Morse & Co.....	51,000
General Rubber Co.....	20,000
APRIL 25.—By the <i>Lucania</i> =Liverpool:	
George A. Alden & Co.....	11,500
Livesey & Co.....	2,500
APRIL 27.—By the <i>California</i> =Bordeaux:	
General Rubber Co.....	33,500
Livesey & Co.....	7,000
APRIL 27.—By the <i>Araca</i> =Hamburg:	
A. T. Morse & Co.....	34,000
George A. Alden & Co.....	11,000
APRIL 30.—By the <i>Pennsylvania</i> =Hamburg:	
Poel & Arnold.....	33,500
Rubber Trading Co.....	6,500
MAY 1.—By the <i>Guiana</i> =Liverpool:	
Poel & Arnold.....	22,500
General Rubber Co.....	9,000
Livesey & Co.....	3,500
George A. Alden & Co.....	3,000
MAY 2.—By the <i>De France</i> =Havre:	
George A. Alden & Co.....	34,000
W. L. Gough Co.....	2,000
MAY 5.—By the <i>Island</i> =Antwerp:	
A. T. Morse & Co.....	11,000
George A. Alden & Co.....	4,500
MAY 5.—By the <i>Minneapolis</i> =London:	
Robinson & Stiles.....	6,500
W. L. Gough Co.....	2,500
MAY 9.—By the <i>Mauretania</i> =Liverpool:	
General Rubber Co.....	11,500
Henry A. Gould Co.....	11,500
MAY 9.—By the <i>Sloterdijk</i> =Rotterdam:	
Poel & Arnold.....	55,000
MAY 11.—By the <i>Blucher</i> =Hamburg:	
George A. Alden & Co.....	11,500
MAY 12.—By the <i>Niederland</i> =Antwerp:	
George A. Alden & Co.....	220,000
A. T. Morse & Co.....	95,000
General Rubber Co.....	25,000
Poel & Arnold.....	22,500
Joseph Cantor.....	22,500
Rubber Trading Co.....	22,500
MAY 14.—By the <i>Hudson</i> =Havre:	
General Rubber Co.....	33,500
MAY 14.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co.....	19,000
Livesey & Co.....	5,000
MAY 16.—By the <i>Lucania</i> =Liverpool:	
General Rubber Co.....	11,500
George A. Alden & Co.....	9,000
Livesey & Co.....	5,000
MAY 16.—By the <i>Kaiserin</i> =Hamburg:	
A. T. Morse & Co.....	19,000
MAY 18.—By the <i>Pretoria</i> =Hamburg:	
George A. Alden & Co.....	5,500
Poel & Arnold.....	8,500

	POUNDS.	
MAY 19.—By the <i>Zeland</i> =Antwerp:		
A. T. Morse & Co.....	34,000	
Henry A. Gould Co.....	9,000	
MAY 21.—By the <i>Comus</i> =Liverpool:		
George A. Alden & Co.....	30,000	
Henry A. Gould Co.....	2,500	
Robinson & Stiles.....	1,500	
MAY 22.—By the <i>Waldsee</i> =Hamburg:		
A. T. Morse & Co.....	28,000	
General Rubber Co.....	15,000	
W. L. Gough Co.....	13,500	
George A. Alden & Co.....	5,500	
Rubber Trading Co.....	11,000	
MAY 23.—By the <i>Therby</i> =Lisbon:		
General Rubber Co.....	112,000	
EAST INDIAN.		
	POUNDS.	
APRIL 29.—By the <i>Comus</i> =London:		
Poel & Arnold.....	3,500	
Livesey & Co.....	1,500	
MAY 4.—By the <i>Jesera</i> =Singapore:		
George A. Alden & Co.....	25,000	
Otto Isenstein & Co.....	35,000	
Poel & Arnold.....	19,000	
Joseph Cantor.....	13,500	
MAY 5.—By the <i>Minneapolis</i> =London:		
General Rubber Co.....	15,000	
MAY 8.—By the <i>Mar</i> =Colon:		
A. T. Morse & Co.....	21,000	
MAY 11.—By the <i>Momus</i> =London:		
A. T. Morse & Co.....	14,500	
Poel & Arnold.....	14,500	
MAY 11.—By the <i>Indians</i> =Singapore:		
Otto Isenstein & Co.....	22,500	
George A. Alden & Co.....	7,000	
MAY 12.—By the <i>Vaderland</i> =Antwerp:		
Poel & Arnold.....	8,500	
MAY 13.—By the <i>Adams</i> =London:		
Poel & Arnold.....	18,500	
MAY 20.—By the <i>Mesaba</i> =London:		
George A. Alden & Co.....	30,000	
MAY 21.—By the <i>Lammers</i> =Colonbo:		
A. T. Morse & Co.....	8,000	
* Denotes plantation rubber.		
GUTTA-JELUTONG.		
MAY 4.—By the <i>Jesera</i> =Singapore:		
J. W. Phytic & Co.....	70,000	
MAY 11.—By the <i>Inarans</i> =Singapore:		
Heabler & Co.....	130,000	
GUTTA-PERCHA.		
	POUNDS.	
MAY 11.—By the <i>Furnessia</i> =Glasgow:		
Kempshall Manufacturing Co.....	2,500	
MAY 22.—By the <i>Waldsee</i> =Hamburg:		
Robert Soltan Co.....	8,000	
BALATA.		
APRIL 29.—By the <i>Parma</i> =Demerara:		
George A. Alden & Co.....	4,500	
APRIL 30.—By the <i>Nazara</i> =Trinidad:		
G. Amsinck & Co.....	11,500	
Frame & Co.....	1,000	
MAY 13.—By the <i>Guiana</i> =Demerara:		
George A. Alden & Co.....	5,000	
Frame & Co.....	1,000	
CUSTOM HOUSE STATISTICS.		
PORT OF NEW YORK—APRIL.		
Imports:	Pounds.	Value.
India-rubber	4,822,752	\$2,419,073
Balata	29,731	12,267
Gutta-percha	10,152	4,943
Total	4,862,635	\$2,436,283
Exports:		
India-rubber	137,765	\$ 80,751
Reclaimed rubber.....	86,383	10,929
Balata	9,776	4,671
Rubber scrap imported....	49,790	\$ 3,613
BOSTON ARRIVALS.		
APRIL 3.—By the <i>Saxonia</i> =Liverpool:		
	POUNDS.	
W. L. Gough Co., Africans.....	2,000	
George A. Alden & Co., Africans.....	11,500	
APRIL 11.—By the <i>Sylvania</i> =Liverpool:		
Rubber Trading Co., Africans.....	6,000	
APRIL 11.—By the <i>Georgian</i> =London:		
Livesey & Co., Africans.....	4,500	
George A. Alden & Co., Africans.....	4,500	
APRIL 17.—By the <i>Rosnia</i> =Hamburg:		
W. L. Gough Co., Africans.....	22,000	
APRIL 22.—By the <i>Bohemian</i> =Liverpool:		
George A. Alden & Co., Africans.....	3,500	
APRIL 25.—By the <i>Sachem</i> =Liverpool:		
Poel & Arnold, Africans.....	9,000	
TOTAL		63,000



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Plantation Rubber From the Far East.

STATISTICS FOR THREE MONTHS ENDING MARCH 31.
EXPORTS FROM THE FEDERATED MALAY STATES.

	1907.	1908.
Perak	pounds.. 53,515	103,227
Selangor	277,872	403,956
Negn Sembilau	90,945	213,350
Pahang	nil	nil
Total	422,332	720,533

TOTAL EXPORTS FROM MALAYA (INCLUDING ABOVE).

	Pounds.		Pounds.
To Great Britain	587,806	To Ceylon	83,821
To Other Europe	103,467		
To Japan	2,933	Total, 1908	782,226
To Australia	4,133	Same period 1907	390,501

	1907.	1908.
From Singapore	pounds.. 358,768	535,600
From Penang	31,733	246,620
Total	390,501	782,220

RUBBER THE PRODUCE OF CEYLON.

	Pounds.		Pounds.
To Great Britain	98,826	Total, 1908	156,509
To Other Europe	6,919	Same period 1907	77,049
To United States	46,107	Same period 1906	57,715
To Australia	3,761	Same period 1905	27,609
To India	896	Same period 1904	24,000

YIELD OF PLANTATIONS (IN POUNDS).

	1907.	1908.
Bukit Rajah Rubber Co.		
Twelve months to March 31	118,082	162,000
Anglo-Malay Rubber Co.		
Three months to March 31	32,078	72,951
Federated (Selangor) Rubber Co.		
Twelve months to March 31	7,871	23,000
Tallambrosa Rubber Co.		
April	18,341	18,000

COMPLETE YIELDS.

	1906.	1907.
Jebong (Perak) Rubber Co.	58,670	68,586
Ceylon Planters' Rubber Syndicate	9,561	45,581
Ceylon Tea Plantations Co.	7,132	13,426
P. P. K. Ceylon Rubber Estates.	143,639	170,036

DIVIDENDS.

Pataling Rubber Estates Syndicate, 35 per cent.; last year, 40 per cent.
Highlands and Lowlands Pará Rubber Co., 12½ per cent.; last year, 11 per cent.
Golden Hope Rubber Estate, 6 per cent.; last year, 5 per cent.

W. D. ALLEN MANUFACTURING Co. (Chicago) have issued a new Catalogue (No. 24) of their products as brass founders, which embodies mentions and descriptions of a large number of hose accessories—lawn sprinklers, couplings, menders, and other articles for use in connection with garden hose, and also an extensive line of racks, reels, and other fire hose accessories. [6¾" x 9¾". 76 pages.]

PARA EXPORTS OF INDIA-RUBBER, APRIL, 1908 (IN KILOGRAMS).

EXPORTERS.	NEW YORK.				TOTAL.	EUROPE.				TOTAL.	TOTAL.
	Fine.	Medium.	Coarse.	Caucho.		Fine.	Medium.	Coarse.	Caucho.		
Schrader, Granger & Co.	3,230		34,440	1,575	47,245	46,340	9,443	36,287	38,206	136,285	177,530
Scholz, Hartie & Co.	14,439	4,950	9,847	4,866	33,202	82,708	18,381	11,776	118,549	231,414	264,616
Gordon & Co.	86,095	16,455	83,881		181,101	36,708	7,162	5,411	9,345	58,626	239,727
Adelbert H. Allen.	14,182	21,540	24,864	54,602	115,187	26,410	4,250	2,040	40,260	73,500	188,747
E. Pinto Alves & Co.	27,200	2,210	29,700		59,110	37,230	3,740	38,280		79,250	138,360
R. Suarez & Co.	6,000	320	2,660	732	5,332	76,252	6,196	4,741	20,806	107,095	113,327
J. Marquez & Co.	6,800	510	29,460		27,779	10,020	2,739	22,195	11,529	46,483	74,253
R. O. Anders & Co.						56,933		8,559	3,092	67,684	67,684
Mello & Co.	19,800	5,786	5,818	730	34,958	14,450	1,530	780		16,760	51,718
Pires, Teixeira & Co.	4,420		10,910		15,030	9,600		14,190		23,880	38,910
De Sagetelle & Co.	11,030	4,760	21,524		37,334	1,540				1,546	38,880
Lanz de Mendoga & Co.	9,350	2,040	11,010	1,803	26,103						26,103
Singelhurst, Brocklehurst & Co.						5,113		4,472	52	9,637	9,637
Guthrie & Co. Miranda Co.	3,006	310	2,947	1,224	7,507						7,507
Para rubber direct.						3,064		2,093	1,577	6,734	6,734
Para rubber direct.	120,794	29,944	91,367	9,834	452,139	519,383	78,527	125,942	438,302	1,162,152	1,614,293
Total, April	313,096	91,149	347,747	289,420	1,042,018	924,956	131,068	277,366	681,718	2,016,000	3,058,026
Total, March	682,575	172,165	447,452	117,311	1,419,203	1,409,736	232,279	330,802	830,652	2,803,460	4,222,762
Total, February	1,019,175	239,591	493,147	164,208	1,937,121	1,832,458	235,386	524,020	991,539	3,583,403	5,520,524
Total, January	851,402	166,204	451,219	16,637	1,622,662	1,341,643	211,060	378,900	616,237	2,547,240	4,109,902

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Vol. XXXVIII. No. 4.

JULY 1, 1908.

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THE CONTROL OF THE INDUSTRY.

THE constant increase in the volume of crude rubber produced is due, not only to new uses which are being found for this material all the while, but to the fact that new users are found every year for the staple articles of rubber manufacture. Wherever civilized people exist to-day many kinds of rubber goods regarded as necessities, and every country in which such goods are made on an important scale is adding every year to its export trade this class of merchandise. Very naturally attempts are made from time to time to establish rubber factories in new fields, for if rubber goods are a necessity in every country, why should not every country provide for its own wants in this line?

The people of every country appear to be able to do something in the way of manufacturing at least the coarser textiles, leather goods, and so on, even if still dependent upon foreigners for the finer or better grades. But with rubber it appears to be different. It is true that the list of countries in which rubber goods factories exist is added to year by year. But the bulk of the production in this line remains confined to the few countries which took up the industry at once upon the discovery of vulcanization.

Of course some of the countries in which rubber goods are now made on a small scale may later take an impor-

tant rank in this industry, but it is safe to predict that the most of them will not. It is well enough to make coarse cotton cloths with native labor in a country where the demand is mainly for a cheap product. But people who use rubber hose or tires or footwear or druggists' sundries want good articles, and generally want the best—a class of products possible to make only with experience, a high degree of efficiency, and generally capable of being made at a much lower cost on a large than on a small scale.

For all of these reasons it is natural that the control of the industry should long be held by those few countries which have led in it for the last half century. There is another reason, however, not less influential. There is no other industry, perhaps, in which changes of practice are so frequent as in the making of rubber goods. What rubber factory in America or Britain or Germany is making any money to-day, depending upon the mechanical equipment of ten years ago, the same compounds, and the same general practice? What then must be the position of the outsider who, ten years ago or more, equipped a rubber works upon the basis of even the best that obtained in these countries at that time and since has introduced nothing new?

The rubber manufacturer, to keep pace with the industry, must be progressive; to do better than he did formerly he must employ new ideas and new methods; the rubber industry, as a whole, is controlled by inventive genius. A people who temperamentally lack the quality last mentioned need not be feared in competition by the countries which now make the bulk of the world's rubber goods, no matter how imitative they may be, no matter how industrious, no matter how low the scale of wages. Wherever the new practical ideas originate the control of the industry must remain. Wherever the rubber manufacture must go abroad for its ideas, practice, and mechanical equipment—inventing nothing, dependent alone upon imitation—there may be good work done and some money made in supplying home demands, but important rank in the industry will be out of the question.

THE COMING OF THE TAXICAB.

THE introduction of the taxicab in America is treated at some length on another page, as pointing to a new and ultimately important demand for rubber tires. We might cite many reasons why the use of these vehicles may be expected to become very extensive in this country, despite the fact that horse-drawn cabs never have come into general use here. But for the present our purpose is rather to suggest that a few failures of taxicab companies while the business is in its infancy will not necessarily prove anything against the general proposition which we have stated.

It is clear that so many vehicles running regularly at so much an hour will bring in a certain amount of money, and the expenses of upkeep and administration may be

figured out pretty accurately in advance. The one drawback, however, is that in the beginning, particularly in cities where cabs have not been in general use, some time will be required for people to get into the habit of using the new vehicles, and during this period the company which lacks a solid financial formation may come to grief.

This thought is suggested in part by the report that the General Omnibus Company, of Berlin, which carried 133,800,000 passengers in their motor "buses" last year, lost about \$130,000. Now, a good many people would assume that, as a matter of course, the conveyance of about 366,575 cash paying passengers per day by a single corporation would result in a handsome profit. Just so the people of New York city seem to think that "subways," because crowded with passengers, must profit the companies operating them, and they clamor incessantly for extensions of the system.

But the transportation problem, in whatever form, is a complex one; one trouble with it is that only practice will prove if it will pay, and a heavy expenditure is necessary before a new service can be put into operation. Then people must get into the habit of using it, then the company must remedy mistakes and supply something which strangely was overlooked at the beginning, and after learning how to run the business economically, there may be dividends for the capital employed.

It is reasonable that a new class of vehicles run for public hire should immediately yield large profits, but one advantage of the motor cabs is that a new service may be started in any city at a less initial cost than almost any other transportation system, and we cannot avoid the impression that ultimately these public vehicles will largely outnumber the privately owned automobiles, the business in which has within a short time become so enormous. When the taxicab does come into its own the tire business will expand as it never has before. Still, as we have said, there may be serious risks in the paths of some of the pioneers in this field.

SOMETHING DOING IN MEXICO.

THERE is reason to believe that Mexican exports are beginning to include considerable rubber obtained from planted trees. It is true that these trees for the most part were planted primarily for the purpose of shading cacao or coffee, but the same was the case with the first trees that yielded commercial rubber in Ceylon. They are planted trees and the rubber is a plantation product just as much as if the original idea had been to form plantations of rubber. And if these trees yield rubber, why should not those trees which were planted for this purpose and no other prove equally productive on attaining the proper size, as they are beginning to do in Ceylon?

The quantity of plantation rubber produced in Mexico thus far cannot be stated so accurately as in the case of the Ceylon product, but some figures on this subject print-

ed in another column appear worthy of confidence. The Mexican representative of an important New York firm states that their purchases of locally produced rubber for export have increased from 7,000 pounds seven years ago to 182,219 pounds in 1907. He is convinced that not over 4,000 pounds of this was "wild" rubber. Besides, he credits the other merchants in the same town with buying half as much more. Supposing the situation to be as stated by this merchant, the plantation rubber shipped last year from one Mexican town amounted to about 267,000 pounds, without reference to what may have been done in other parts of the republic.

Now, this is more rubber than was shipped from Ceylon in any year prior to 1906. It is more than was shipped from Malaya in any year before that date. It is more than all the rubber, of whatever kind, shipped from Mexico in the fiscal year 1897-98, and it has come about so quietly that most persons who read these lines probably will be surprised. Yet these figures are larger than those from the Far East which first gave a "boom" to rubber planting over there and led to the formation of some of the most prominent plantation companies that have been capitalized in England.

One hundred and eighty tons or so of rubber, considered alone, is not of much importance; considered as the product of planted *Castilloa* trees in Mexico, and evidence that such trees can be cultivated profitably, it is a matter of very real importance to the owners of several millions of planted trees who have been waiting for assurances that their money has not been thrown away. We hope that this latest intelligence will encourage more plantation managers in Mexico to get in readiness to do some systematic rubber tapping on a liberal scale.

INTERNATIONAL "TRUSTS."

AN international steel trust is positively reported to be in process of formation to combine important interests in Great Britain, continental Europe and the United States. It may be that the report is premature, but it reflects a definite tendency in the economic world to-day. However "trusts" may be criticized, in general or in particular, it must be admitted that industrial combinations have become a part of the established order of things, and we can see no indication of a return to the conditions that prevailed before the "trusts" came. Who is not better pleased with the through train service across the continent to-day than with the earlier mode of travel, when one had to change cars several times in crossing a single State, paying fares to a different company with every change?

The proposition calls for no argument that if combinations in manufacturing bring better results, they will be entered into; if not, they will be avoided. A general tendency toward combinations, therefore, would tend to demonstrate the soundness of the theory

on which they are based, no matter if mistakes are made in the management of this one or that. Are no mistakes made by individual manufacturers, and even by the smallest? Of course the public sentiment against "trusts" has been due to a fear that the creation of monopolies might enable producers to demand extortionate prices, and if this fear proves unjustified by events the popular outcry will cease.

If industrial combinations have merit at all, there is no reason why they should be confined each to a single country. International trading has become the rule in all important branches, and international combinations may become as important in tending to regulate trade between countries as the amalgamation of several factories having a common purpose in any given country. In the steel rail business, for example, or the manufacture of steel armor for warships, where practically the same kind of products is used in all countries, an international combination might result in supplying any particular purchaser with goods at rates lower than those now fluctuating at the instance of individual manufacturers. Besides which, and what is not less important, is the matter of stability of prices, upon which so much depends in maintaining profitable trading conditions.

The output of the rubber industry is more diversified than that of the steel works, and is not handled in such large quantities. Still, universal types have been developed in rubber production—for instance, in automobile tires—and in the new economic development now in progress it will not be surprising if international rubber companies should yet figure in commerce. We may see a single corporation producing its own rubber on plantations, making all or part of its machinery, manufacturing its textile fabrics, and, generally, controlling all the processes involved in converting the tree product into the rubber goods of commerce. But all of this without controlling the rubber industry as a whole, or making it impossible for new factories to be established by individual initiative.

It is not unlikely that the formation of international industrial combinations will be facilitated by the readjustment of international patent regulations now in progress. For instance, the American owner of a British patent, who must produce the article covered by it in Britain in order to render the patent valid there, will have a direct incentive to join a combination of manufacturers in both countries, thus forming perhaps the nucleus of an international "trust."

UNDERGROUND WIRES IN BOSTON.

THE report of the commissioner of wires of the city of Boston for 1907 shows a large amount of work to have been done during the year in placing underground telegraph and telephone and other electric wires which formerly were operated overhead. At the end of the year the underground electrical services of Boston embraced 1,534,615 feet of con-

duct, 9,955,932 feet of single duct, and 12,426,799 foot [247,937 miles] of cable. Of the 485,526 feet of cable placed underground during 1907, about 10 per cent. belonged to the Western Union Telegraph Co. and the American Telephone and Telegraph Co., employing paper insulation alone. Of the 15 other companies named, 9 are referred to as using rubber insulation alone, and the others rubber to a greater or less extent.

The following extract from the Boston report may prove of interest generally.

"During the year there has been no electrical fire due to wiring approved by this department, and I am pleased to be able to report that, with the exception of four fires in stations of the public service corporations, with a reported insurance loss of \$11,383, the total reported insurance loss for the electrical fires in this city during the year was but \$100."

VORITE, A NEW SUBSTITUTE.

A NUMBER of inquiries have come to THE INDIA RUBBER WORLD as to what Vorite is. Samples have been sent to the office of THE INDIA RUBBER WORLD, and according to the statement of the manufacturers it is a substitute containing absolutely no sulphur and no acid. The melting point for the soft grade is from 300° to 360° F., and for the harder grade 550° F. It is a floating substitute and burns without leaving any ash. It is made in three grades, which are distinguished by the names soft, ground, and white. According to the makers it absolutely resists oxidation and drying out, and is already largely used in the manufacture of insulated wire and in general mechanical rubber goods.

ECHO OF MR. BALLOU'S FISHING TRIP.

THE picture of Mr. Walter S. Ballou, of the rubber trade, and his fine catch of landlocked salmon near Topsfield, Maine, shown in the last INDIA RUBBER WORLD (page 312), appears to have created no little interest in the office of the Maine commissioners of inland fisheries and game, at Augusta. That office has decided to investigate the conditions of fishing in the region referred to, and the board's civil engineer has been directed to make plans for a fishway at Topsfield, the construction of which will be ordered if the conditions reported with regard to dams are really found to exist.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for April, 1908, and for the first ten months of five fiscal years, beginning June 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
April, 1908.....	\$100,649	\$22,651	\$320,173	\$443,473
July-March	1,040,985	1,342,965	2,802,371	5,186,321
Total	\$1,141,634	\$1,365,616	\$3,122,544	\$5,629,794
Total, 1906-07....	1,040,500	1,007,935	3,015,892	5,064,387
Total, 1905-06....	1,035,705	1,360,346	2,369,480	4,765,531
Total, 1904-05....	704,256	1,100,093	2,064,090	3,958,415
Total, 1903-04....	734,083	971,625	2,030,682	3,742,390

THE bureau of manufactures at Washington is in receipt of a letter from an American house in the export trade advising that it has a foreign inquiry for a special kind of rubber used in the manufacture of shoes, and would like to hear from firms in a position to furnish the material.

The Cost of Rubber on The Amazon.

AN article on "The Cost of Amazon Rubber" was reproduced from this journal recently in *La Chronique Coloniale*, of Brussels, in a later number of which we find the matter which follows:

THE COST OF AMAZON RUBBER.

In consequence of an article taken from THE INDIA RUBBER WORLD [April 1, 1908—page 209] and published by us in our preceding issue, we received the following letter, which we hasten to publish in our columns, the more so because the opinions expressed therein concur with our own. We confess, moreover, that we printed the previous article in the hope that it would call forth a reply.

TO THE EDITOR: Allow me to discuss a paragraph of the article on the cost of Amazon rubber, published in the *Chronique Coloniale*. The article in question states that the Brazilian gatherer is compelled to gather rubber at any price, so as to provide the necessities of life.

The contents of the said article, considered as a whole, might cause your readers to conclude that Brazil will continue to produce as much rubber as she does at present, independently of the price which this product may bring in the market.

It is true that a certain part of the settled population of Amazonas will always produce rubber, even though prices should show a considerable decline. This refers to the same class of people concerning whom you state that they produced rubber in the remote past, when that substance brought only from 3 to 5 francs per kilogram.

However, it will be advisable to take into consideration that the rubber production of the Amazon, which has continually increased until it reached 60,000,000 pounds in 1907 [The arrivals at Pará were 82,550,000 pounds.—THE EDITOR I. R. W.], is largely due to the immigration of large numbers of laborers from the surrounding territories, and more especially from the state of Ceará. These laborers will undertake this long and disagreeable journey only if they are sure to be very liberally rewarded by the proceeds of the work of rubber gathering. To this must be added the quite large traveling expenses incurred by the laborers thus drawn towards the places where the rubber is to be gathered.

In order to attain the present production in Brazil, it was not only necessary to attract new labor from outside districts, but likewise to penetrate into territories hitherto little utilized, and to which laborers and provisions can only be transported at an exceedingly large expense. Therefore, even though it may be considered an undeniable fact that Amazonas will always produce rubber, no matter what its market price may be, it is, on the other hand, evident that if prices remain on their present level, the production would soon decrease to a considerable degree.

AD. HALLET.

VIEWS OF THE LATE MR. WICKHAM.

THE question of the cost of Amazon rubber was very carefully studied during his several visits to Brazil by Mr. Reginald W. Wickham, F. R. G. S., of England and Ceylon, whose death, we regret to learn, occurred recently in the Far East. Writing in *The Times of Ceylon* something over a year ago, Mr. Wickham declared: "There is no such thing as an average cost, as no man working rubber on the Amazon has the vaguest idea what it does cost." It would appear that the actual rubber tapper in the forest camps is paid for his work in goods, which are charged for by the merchant or employing classes at a rate which they intend shall be high enough to protect themselves against loss.

More recently Mr. Wickham contributed some further articles to the *Ceylon Times* on the cost of Amazon rubber, in which he predicted that "Brazilian rubber will not cease to be harvested when the price falls to 3 shillings [= 73 cents], nor even if it fell to 1s. 6d. [= 39½ cents]," for reasons which he proceeded

to state—chiefly, that rubber is still coming forward, the goods to pay for which went to the interior 18 months or more ago, based upon calculations that the then prevailing higher prices of rubber would continue. Evidently what Mr. Wickham meant, however, was that rubber gathering on the Amazon would not cease *at once* on account of the most radical decline in price, but that ultimately conditions would shape themselves to new price levels, lower prices in the world's markets discouraging the rubber workers and higher prices stimulating the industry.

On general principles, Mr. Wickham's position must be regarded as sound, the same principles applying to all forms of human activity. But the point to be made is that Brazil's bed rock producing rate for rubber remains yet to be shown. Hitherto the chief rubber producing districts have been so remote that ordinary considerations of supply and demand have not had an immediate effect at any time upon the work of getting out rubber; it has only affected prices in the consuming markets, though, of course, fluctuations there have ultimately affected the handlers of rubber back of the larger primary markets.

In midsummer, 1902, Island's fine Pará rubber at New York was not quoted at above 70 cents per pound, having declined from \$1.10 at the beginning of 1900. Did this decline check production? The crop season ending June 30, 1902, showed arrivals at Pará of 300,000 tons. In the successive years the arrivals were 29,850 tons, 30,580 tons, 33,060 tons, 34,490 tons, and 38,005 tons. In no year following 1902 is reflected in the Pará situation any falling off in production consequent upon the extreme low prices of that year.

Naturally, all rubber gathering is not profitable to those engaged in it, whether as principals or employees. But the failure of one individual or group in the business may not prevent others from profiting from it under precisely the same conditions. The best evidence that there is some sort of profit in rubber gathering in Amazonas is that it has continued for so many years, resulting in a constantly increasing product, without regard to prices in the outside world. To refer again to Mr. Wickham, he wrote at one time that native rubber at 1s. 6d. per pound would not and could not pay the producer. Yet in the same article he says: "It did not pay to sell coffee at 27s., but it was sold; it did not pay to sell Ceylon tea at 3½d., but it was sold." Who, then, shall determine the minimum price at which rubber can be produced without loss to those engaged in the business? In other words, what decline in selling prices will stop the export of rubber from the Amazon?

If space permitted, more might be said about the conditions under which trading in raw rubber is conducted. The head of the largest firm at Manaus, handling millions of pounds of rubber yearly, assured THE INDIA RUBBER WORLD that they were not concerned about the price of rubber; they only executed buying commissions for American and European firms at a fixed rate. The rubber importing houses in Liverpool and New York do not get even so near to the local traders who induce the natives to gather rubber, but buy rubber actually in sight at Pará or Manaus. Whether it has been produced at a profit or a loss does not concern them.

It may not be out of order here to reproduce the concluding paragraph of THE INDIA RUBBER WORLD's article in the April issue: "The real question is not 'At what low figures will Brazil stop producing rubber?' but 'How cheaply can anybody else supply equally good rubber?'"

Incidentally it may be asked, now that rubber is advancing, is it because Amazon rubber is growing scarcer?

The indications are that this year's "crop" on the Amazon is the largest known, with one exception

Rubber and Other Interests in Guatemala.

WHILE most of the news reaching the United States from Guatemala is of a political character, there are evidences to those who study conditions in the latter country that progress is being made there, and the opportunities for the investment of capital having been taken advantage of to a large extent by European capitalists. It is doubtless due to the fact that Americans have been slower to make investments in

Guatemala that the average newspaper reader in the States is so little informed in regard to Guatemalan progress.

PRESIDENT CABRERA.

Speaking of political news, it may be mentioned that the latest development in Guatemala in this field related to the attempted assassination of President Cabrera, in April last. It may surprise those persons who imagine "revolutions" to be of frequent occurrence in the southern republics to know that the gentleman named has held the presidency for 10 years, having been elected in 1898. Previously he had been vice president, and before that a cabinet minister, after having filled a judgeship. It will be seen, therefore, that Estrada Cabrera is no novice in the affairs of government. The recent attempt upon the president's life has not been connected with any political movement. He was on the street, accompanied by a young army officer, when they were fired upon by a group of students, the officer being killed. Some of the students convicted of complicity in the crime were so young that Cabrera refused to sign death warrants for them.

Among the Americans who have become investors in Guatemala is Mr. Leo F. Nadeau, of Providence, Rhode Island, who is interested in rubber growing and grazing in that republic, for which he has been appointed consul at Providence, his home city. Mr. Nadeau has recently made public some expressions in regard to President Cabrera, whom he considers enterprising and progressive, and liberal toward American ideas. He says that the better educated and more substantial portions of the population supports the president, regarding much of the country's wealth and present prosperity as due to his policies. The president has been active in developing a public school system, and in opening the way for German, American and British capital.



MANUEL ESTRADA CABRERA.
[President of Guatemala.]



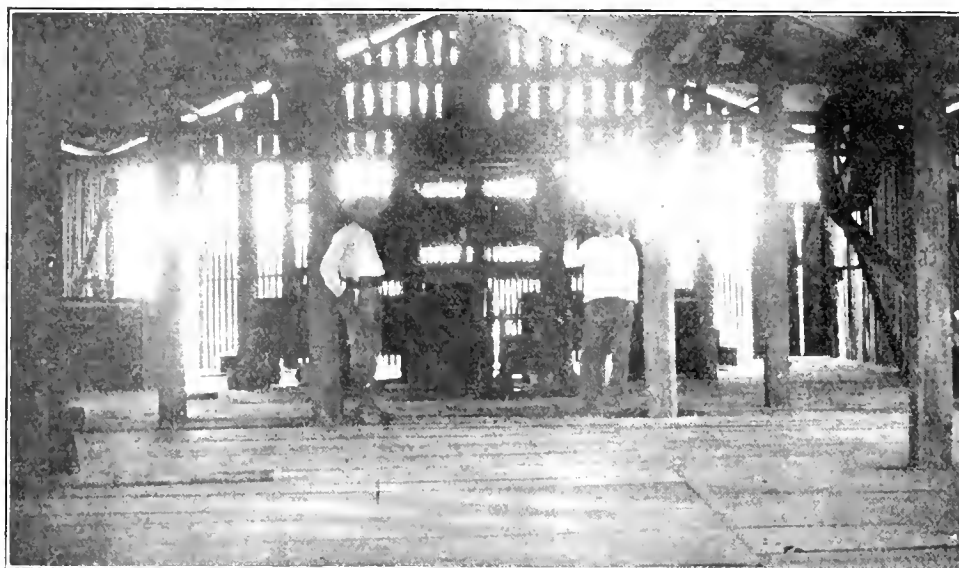
A RUBBER PLANTATION IN GUATEMALA.

[View on the estate of La Nueva Providencia Rubber Co. At the left appears Mr. Leo F. Nadeau, secretary and treasurer of the company.]



"CASTILLOA" RUBBER IN GUATEMALA.

[The trees on this property have resulted from the sowing of seeds among forest trees, and are now yielding commercial rubber.]



FACTORY PLANT OF THE WEST COAST RUBBER CO., IN GUATEMALA.

[On the left is the Creamer; in the center the R.O.s, made at a Guatemala foundry, and on the right the Press.]

THE NATIONAL RAILROAD.

An event of great importance to the development of Guatemala was the recent completion of the Northern Railroad of Guatemala, which extends for 105 miles from Puerto Barrios, on the gulf coast, to Guatemala city, the capital of the republic. Beyond the latter city a previously existing line runs to San Jose, on the Pacific coast, thus giving Guatemala a trancontinental railway. Hitherto Guatemala has been singularly inaccessible. Rather than attempt the journey from the Atlantic coast overland to the national capital, a New Yorker, for example, who desired to visit that city would journey to San Francisco by rail, taking a ship thence down the coast, the time required to reach Guatemala city being 20 to 30 days from San Francisco. Puerto Barrios is only 5 days from New York by steamer, and 2½ days from New Orleans, to which must now be added only 105 miles of travel by rail to reach the capital.

The construction of the Northern Railroad of Guatemala has been very expensive—something like \$12,000,000—owing to the engineering difficulties to be faced, but it is anticipated that the benefit to the nation will render it a profitable enterprise. It was constructed by the Guatemala Railway Co., a New Jersey corporation, of which the president is Minor C. Keith, a former Brooklyn man, who has done so much for the development of Costa Rica and is now vice president of the United Fruit Co. The vice president of the Guatemala Railway Co. is Sir William C. Van Horne, K. C. M. G., chairman of the Canadian Pacific Railway Co., and president of the Cuba Railroad Co. Shipments of freight from Guatemala to the United States have been largely from the Pacific coast via the Panama railroad, but much of this traffic will now, it is thought, be carried over the new all rail route across the republic. The advantages of the new transportation facilities naturally will tend to encourage many forms of industry in Guatemala, including planting interests.

THE RUBBER INTEREST.

Consul Nadeau describes Guatemala as among the wealthiest Central American republics. Outside of agriculture its natural resources have been developed very little as yet, but its coffee, cacao, rubber, spices and sugar interests are large and growing. Exports of American goods are extensive, but the bulk of the exports goes to Europe, Germany taking most of the coffee produced.

Native rubber (*Castilloa elastica*) has long been exploited in Guatemala, the quality being favorably regarded in the markets.

The exports still include native rubber, in addition to which the produce of plantations is beginning to be offered. According to recent consular reports the shipments of rubber for eight years were:

	Pounds.
In 1899	520,993
In 1900	529,984
In 1901	495,040
In 1902	428,212
In 1903	—
In 1904	445,045
In 1905	373,152
In 1906	393,533

The first rubber plantations established in Guatemala were in connection with coffee planting, and have come into the control largely of German mercantile houses interested in the coffee trade. Such a plantation is "El Baul," on the Pacific coast, from which a large specimen of crude rubber was taken to the Paris Exposition of 1900, being awarded

a medal. [See THE INDIA RUBBER WORLD, July 1, 1902—page 314.]

More recently several companies have been organized in the United States for the purpose of planting rubber in Guatemala, either alone or in connection with other crops, or in connection with grazing or the marketing of valuable native woods. One such company is La Nueva Providencia Rubber Co., incorporated in Rhode Island, of which Mr. Leo F. Nadeau, of Providence, R. I., already mentioned in this article, is secretary and treasurer. They have planted rubber extensively, and are devoting attention to other sources of income while awaiting the development of the rubber. Their property is in the district of Escuintla.

The West Coast Rubber Co., incorporated under the laws of New York state, and having headquarters in New York city, also have an estate—Plantation "Panian"—in the district of Escuintla. On this property a great many rubber seeds were sown in the forest lands by farm owners, with the result that a considerable number of trees are now large enough to yield rubber, and the product is being marketed. Several other American companies have been organized to plant rubber in Guatemala, but the extent of their developments is not now known.

A Belgian enterprise, formed a year or two ago, is the Cie. Franco-Belge du Guatemala, capitalized at 2,000,000 francs, and designed for planting rubber as well as exploiting the native product.

THE American consul general at Rio de Janeiro, Mr. George E. Anderson, reports that the decline in rubber prices has led to financial stress in the Amazon states, not alone among the rubber trades, but in every line of business. He says: "The general situation is reflected at large by the fact that the shipments of rubber in 1907 brought in Brazil a total of about \$63,200,000. At the prices for the gum obtaining in 1906 this sum would have been about \$78,000,000, and at the prices obtaining at the present time and apparently likely to continue most of the present year, the income from rubber on the basis of last year's shipments will amount to only \$47,000,000, or \$15,000,000 less than last year's income, and about \$30,000,000 less than that of the year before, which the governmental world had come to regard as normal."

THE dividends of the Amazon Steam Navigation Co., Limited, for the business year 1907 amounted to 5 per cent., after having been only 4 per cent. for several years.

The News of Rubber Culture.

MEXICO SHIPPING PLANTATION RUBBER.

THE most definite and tangible information yet made public in regard to plantation rubber in Mexico occurs in the report of Mr. Lincoln Fishback, of Greeley, Colorado, who was selected by his fellow investors in the Monte Cristo Rubber Plantation Co., of Greeley, to visit their property in Mexico, which report has appeared in pamphlet form. The Monte Cristo plantation was begun only two years ago and of course is not producing rubber as yet, but after looking over the property and noting the progress made it occurred to Mr. Fishback to investigate reports which have been heard from time to time that plantation rubber is actually being exported from Mexico.

He learned that such rubber was being shipped from Frontera, a seaport, and that the source of this was in the neighborhood of San Juan Bautista, in the state of Tabasco, which is reached by sailing up the river Grijalva from Frontera. On April 14 last Mr. Fishback and the manager of the Monte Cristo company's plantation—which by the way, is not a great distance from Frontera—arrived at San Juan Bautista, which they found to be the largest city and commercial center in that part of Mexico, with a population of 12,000. They bore a letter from the United States consular agent at Frontera to Carl Schweickhardt, agent for Harburger & Stack, of New York, who opened his books and gave figures of rubber shipments by his house from San Juan as follows:

Pounds.		Pounds.	
In 1902 ..	7,404	In 1905.	88,044
In 1903 ..	44,000	In 1906.	172,488
In 1904 ..	60,013	In 1907.	182,219

Mr. Fishback proceeds: "He stated that of the last year's purchases less than 4,000 pounds was wild rubber, the balance coming from cultivated rubber orchards. He also stated that he thought other buyers in San Juan had bought half as much more, which would make total shipments from San Juan in 1907 about 273,000 pounds. All this rubber came from orchards raised and owned by Mexicans. Mr. Schweickhardt was of opinion, that because of crude methods and only one tapping per year but a small part of the rubber was being gathered that could be taken from the trees without injuring them."

The house of Harburger & Stack, mentioned here, is an important one, and an illustration of their store in San Juan was given in THE INDIA RUBBER WORLD, June 1, 1908 (page 201). The above figures have been sent to Washington by the consular agent at Frontera, and appeared in *Daily Consular and Trade Reports* for June 5. Their interest may be heightened by a comparison with the figures of Frontera's rubber exports in the fiscal year 1897-98—64,513 pounds all told. In that year Mexico's

total exports of rubber of all kinds were only 102,324 pounds.

Mr. Fishback found that most of the rubber reported to come from the vicinity of Copala, a town about 60 miles distant, in the state of Chiapas, and thither he went, on horseback. On the last 20 miles of the ride he passed continuously through rubber which had been planted mostly as shade for cacao, so that the rubber trees had had to share with another crop the fertility of the soil. But in spite of this the trees were splendid specimens, many of them averaging 10 inches in diameter at 10 years old.



VIEW ON PLANTACION BUENA VENTURA.

[Estate of Mr. James C. Harvey (shown in the picture), in Vera Cruz, Mexico. Planted *Castilloa* rubber in tapping; with bananas on the right, planted to check the grass.]

On the plantation La Asimonia, owned by Aristeo Gonzales, there are about 12,000 rubber trees, of which 25 per cent are of tappable age, and 75,000 cacao trees. Their chief attention having been given to cacao, the rubber tapping has been done only in a desultory manner, and no statistics have been kept. On the neighboring plantation "Meridia," owned by Señora Dolores Medina Alfaro, there are about 9,000 rubber trees. Here, too, cacao growing is the chief business, the rubber tapping being intermittent, insufficient, and by improper methods, the machete being used exclusively instead of a rubber tapping knife. They gathered last year, however, 8,500 pounds of rubber, and Mr. Fishback thinks that with proper management this product could have been trebled.

Mr. Schweickhardt is quoted as saying that he had taken 5 ounces of rubber from a 7 year old tree at a single tapping, and Mr. Fishback sees no reason why several tapplings a year cannot be made. In the Teapa district he found the natives tapping rubber trees as young as 4 years.

Mr. Fishback spent 10 days visiting 16 American rubber plantations, and several Mexican rubber plantations elsewhere than in the Teapa district. He reports: "Frankly I saw much of failure. The same results will follow with the lack of culture in raising potatoes or corn. On every plantation

visited I saw the proofs of what good culture will do, what bad culture has done." Where proper soil had been selected and the trees had good care Mr. Fishback found fine rubber trees—the evidence of successful rubber culture, the proofs of the apparent merit of the enterprise."

A leading rubber importing firm write to THE INDIA RUBBER WORLD: "We are beginning to get consignments of *Castilloa* rubber from the plantations in Mexico, and to-day received a letter advising 800 pounds of 'creamed' from one plantation and as much more from a neighboring plantation, the latter gathered and cured we know not how. We are of the opinion that if we make a point of it we can get quite a little Mexican plantation rubber now, and will receive increased quantities as

time goes on, provided we get good prices, which we can do. What we should like is a list of the different plantations, in order to be able to communicate with them."

MR. HARVEY'S TREATMENT OF "CASTILLOA" LATEX.

MR. JAMES C. HARVEY, one of the pioneers in systematic rubber planting in Mexico, and now manager of an important plantation there, has written to a friend some notes on the treatment of *Castilloa* rubber, from which, while not meant for publication, THE INDIA RUBBER WORLD is now able to print some extracts, as follows:

"My idea with regard to the treatment of 'scrap' is this: Immediately after gathering it in baskets, loosely place it on wire racks, through which smoke can penetrate easily, and of course, a proper house must be constructed that will be sufficiently air tight to hold smoke; then have a little furnace quite detached from said house, and into which the smoke can be driven through a pipe by the action of a very simple revolving fan, thus avoiding any great increase of temperature in the smoke-house, as doubtless you know that a temperature much above 100° F. is apt to cause the rubber to become sticky.

"This is easily proved by exposing any recently prepared scrap or *plancha* to the action of the sun; then after the scrap is smoked in the manner described my idea is that it should be pressed into blocks of perhaps of 5 or 10 pounds in size. It will be understood that the block is in this manner thoroughly antiseptized throughout, and undoubtedly we must find what material would be best to use in creating this smoke, as certain materials, for a given volume of smoke, contain a higher percentage of creosote than others.

"With regard to the treatment of the *plancha*—or I ought to say, the treatment of the latex in order to prepare *plancha*—I carried out this year the following method:

"First, on the receipt of the latex from the field it was mixed with an equal volume of water to facilitate its passage through a comparatively small or fine meshed sieve, thus excluding all extraneous substance, such as little pieces of bark, chips, moss, lichens and what not. To this 4 additional volumes of water were added, and the whole placed in a barrel with a faucet exactly level with the base of the barrel, the barrel being stood upright.

"The following morning the latex was found to have arisen to the surface, having been completely separated during the night from the water and other liquids contained in the original latex. The black water was then drawn off until the latex appeared. Said latex was then in a condition for coagulation, this method being carried out:

"First, to every 10 gallons of the creamed latex a solution of the vine known here as 'amole'—botanically *Ipomoea bonanor*—is prepared, employing about 2 pounds of the vine, cutting the same into convenient lengths of about one foot, and preferably using the more ligneous portion of the vine—that is, portion of it nearest the ground—and where the bark has assumed a brownish color. It has been found that this portion of the vine contains a greater percentage of the coagulating agent than the green part.

"The solution is then prepared thus: A dozen pieces of the length described are macerated by beating with a mallet or wooden 'truncheon' and rubbed in about 5 gallons of water and then squeezed out, the process occupying but a few minutes time. The resultant liquor is then strained through a very fine sieve and stirred in carefully with the creamed latex.

"Coagulation, as a rule, will then take place within an hour's time, when the spongy mass can be lifted out carefully and placed upon a table or block and if coagulated in a vessel of about 18 inches in diameter will be found to be of about 3 inches in thickness. With a sharp butcher knife it can then be cut into strips of about 1½ inches in thickness and can be run backward and forward through an ordinary rubber rolled clothes

wringer, over which is suspended a vessel containing water which is allowed to run in a little stream on the top of the wringer while the process is being carried on.

"These strips by the gradual screwing down of the roller can be reduced to about ½ inch in thickness. The wringer process should be carried on until there is no further evidence of a colored liquor being expressed from the strips or slabs under operation.

"It will be seen that two ends have been accomplished by this process, a very clean product, and practically the minimum of moisture left in the slab. The strips or slabs are then thrown into clean water, rinsed and hung up in a dark room to dry, then we have found it an excellent plan to suspend them on bamboo rods and when reasonably dry, yet still containing perhaps a small portion of water, the identical smoking process as applied to scrap rubber can be then applied, very soon after which the product will be ready for packing.

"Undoubtedly the application of more elaborate machinery appliances would prove more economical, yet by employing the process described, two men can easily handle 50 pounds of dry rubber per day."

NEW METHOD OF TAPPING "CASTILLOA."

MR. J. HERBERT FOSTER, manager of the plantation "La Meriden," in Vera Cruz, Mexico, reports a new method of tapping their cultivated *Castilloa* rubber. He uses the same knife as before—a knife brought out by Mr. Smith, of Chiapas, and described sometime in this journal—which cuts a U shaped groove in the bark, but making the cuts only about two-thirds the former depth, and then with a blade like that of a jackknife a deeper cut is made along the middle of the first one. This makes certain that the layer of bark which contains the latex is penetrated throughout its length, but the cut is so narrow as to make a comparatively trifling wound. It is said that these cuts are entirely healed in two or three months, whereas the old style cuts required a year or two to disappear.

ROBLITO RUBBER PLANTATION CO.

INCORPORATED February 4, 1908, under the laws of Arizona; capital authorized, \$600,000; to develop an estate at Mapastepec, in Tonala district, state of Chiapas, Mexico. There are on the property about 10,000 8 year old planted *Castilloa* rubber trees and many thousands of wild trees. It is intended to plant rubber largely, and also other tropical crops, besides grazing capital and utilizing the hard woods now on the ground. The headquarters are at Oakland, California. The officers are: William P. Jarvis, president; L. C. Lent, vice president; S. C. Miller, an engineer with much experience in Mexico, general manager; J. L. Elder, treasurer; L. A. Carter, secretary.

BRIEF MENTION.

MR. MAXWELL RIDDLE, of the Republic Development Co. (New York), having returned from a recent sojourn in Mexico, speaks of being particularly impressed with the result of observations in the rubber planting belt, particularly as regards the rate of yield of the young trees when tapped with suitable knife and the low cost at which he found rubber extracted. He has figures pointing to 10 cents Mexican as the cost of getting out rubber under specially favorable conditions and expresses the opinion that generally rubber may be got out for twice this figure.

The last annual inspection of the "Estancia" rubber plantation of the Pennsylvania Obispo Plantation Co. (Scottsdale, Pa.), in Mexico, was made by Mr. W. A. Marvin, chosen for that purpose by the shareholders. His report refers also to a number of neighboring estates, and the prospects he regards very favorable for rubber cultivation in Oaxaca.

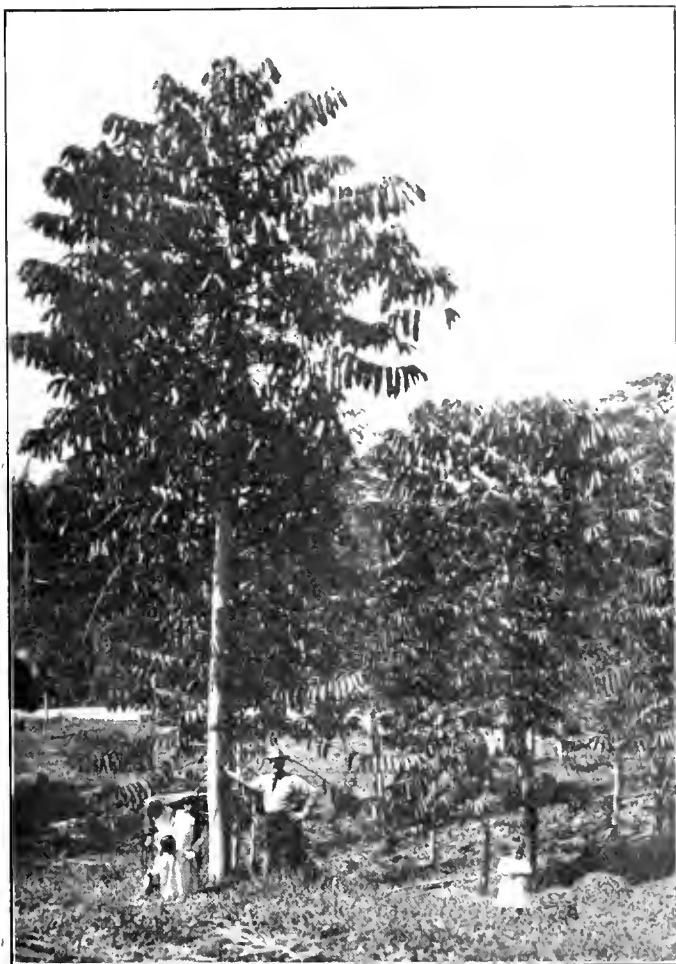
LARGE COMBINATION IN TEA AND RUBBER.

HARRISONS & CROSFIELD, LIMITED, is a recent London flotation for combining the old established business of Harrissons & Crosfield and allied tea trading firms, with houses in London, New York, and Montreal, and in Ceylon, India, and the Federated

Malay States. The new company is capitalized at £307,500 [= \$1,494,448.75]. The tea business will be continued, and the company's interest in rubber planting, already extensive, is likely to be extended. Mr. Charles Arthur Lampard, one of the board, is a director also in a number of important rubber companies. The accounts of the combined companies show advances to and expenditure on tea, rubber, and produce estates, and interests in companies owning estates, of £108,294 5s. 7d. [= \$526,795.15]. Registered offices: 3, Great Tower street, E. C., London.

REPLACING "FICUS" WITH "HEVEA."

THE Selangor Rubber Co., Limited, in view of the better results attained from *Hevea* than from "rambong" (*Ficus*) rubber, have decided to cut out the latter, having already interplanted it with *Hevea*. The Consolidated Malay Rubber Estates, Limited,



WELL DEVELOPED SIX-YEAR-OLD "CASTILLOA" TREE

[On one of the estates of the Chiapas Rubber Plantation Co., in Chiapas, Mexico. The figure to the right of the tree is Mr. W. H. Thompson, connected with the company—a gentleman 6 feet tall.]

who have 3,343 "rambong" trees, some of which have begun to yield, have decided to extract from them as much latex as possible and gradually replace them with *Hevea*, for which they consider their land better adapted.

RUBBER PLANTING IN THE FAR EAST.

THE Golden Hope Rubber Estate, Limited, marketed during 1907, 4615 pounds Pará rubber and 976 pounds "rambong" (*Ficus elastica*)—total 5391 pounds—which sold at an average of 3s. 7³/₄d. [=88.6 cents]. The average yield per tree of Pará rubber was 5¹/₂ pounds, dry. Rubber seeds and plants sold worth £2295 3s. 4d. The company also continued to market coffee. Dividend declared, 6 per cent. Rubber sales for the preceding year, about 2400 pounds; dividend, 5 per cent. At the

second annual meeting (London, April 8) it was voted to increase the capital from £40,000 to £50,000.

At the fifth annual meeting of The Pataling Rubber Estates Syndicate, Limited (London, April 8), the rubber crop for 1907 was reported at 58,004 pounds, against 43,316 pounds in 1906; average net price, just over 3s. 8¹/₄d. [=89.7 cents]. Dividends to date: 20 per cent. for 1905; 40 per cent. for 1906; 35 per cent. for 1907. The cost of tapping rubber in 1907 was 16¹/₂ cents (silver) per pound, against 22¹/₂ cents in 1906. Profits were smaller for the year, however, since the average price obtained in 1906 was 5s. 17¹/₄d. [= \$1.24³/₄].

The Rubber Estates of Johore, Limited, at the end of 1907 had planted 1973 acres in rubber. It is intended this year to increase the acreage to 3000. The expenditure during 1907 for development and upkeep reached £18,870 1s. 7d.

The Linggi Plantations, Limited, in the Malay States, collected in 1907 from their "Linggi" estate 61,297 pounds of rubber, against 17,228 pounds in 1906. From "Bakit Nanas" estate, lately acquired, 49,443 pounds were collected, making a total for 1907 of 110,740 pounds. Net profit for the year, £14,760 [= \$71,827.54]. Dividends: 7 per cent. on the preference and 20 per cent. on the ordinary shares.

The rubber yield of the Consolidated Malay Rubber Estates, Limited, in 1907 was 63,615 pounds, from about 200 acres, averaging 3.02 pounds per tree. The company have now 1,599 acres under rubber. Last year's yield was 32,003 pounds. The dividend for 1907 was 10 per cent., the same as in the preceding year.

The Samblas Rubber and Gutta-percha Co., Limited, registered in London last autumn to develop rubber plantations at Borneo [see THE INDIA RUBBER WORLD, November 1, 1907—page 43], at a meeting in London on February 28, decided on voluntary liquidation—presumably on account of a defect in the title of the properties to be acquired.

Mr. Francis J. Holloway has resigned as general manager of the Kepitigalla Rubber Estates, Limited, being succeeded by Mr. W. H. Sinclair, the change dating from March 14 last. Mr. Holloway was one of the pioneers in successful rubber culture in Ceylon, and was manager of the Kepitigalla estate, the nucleus of the present £225,000 company, formed in April, 1906.

GOOD RESULTS OF THE SELANGOR COMPANY.

At the annual meeting (Glasgow, June 2) of the Selangor Rubber Co., Limited, the reports made to the shareholders embraced figures which compare with those of earlier dates as follows:

	1905.	1906.	1907.
Rubber crop, pounds.....	29,750	70,577	120,524
Rate of dividend.....	20%	40%	41.6%

The average yield per tree was 11¹/₂ pounds, but many of the trees were tapped for the first time in 1907, and Mr. W. W. Bailey, the manager, asserts that no other estate in the Malay States has been tapped so lightly as that of the Selangor company. The estimated yield this year is 200,000 pounds. Shares sold recently at 7 times the par value.

A LARGE SIX YEAR OLD "CASTILLOA" TREE.

AN illustration herewith has been made from a six-year-old rubber tree (*Castilloa elastica*), on one of the estates of the Chiapas Rubber Plantation Co. (San Francisco), in the state of Chiapas, Mexico. A distinctive feature of the property shown is that it is a shade grown plantation; that is, the trees are grown in only partial clearing, as against total clearing, burning, and planting in the sun, in vogue on many plantations. This method, it is claimed by the company, costs less in the first place, retains all the natural richness of the soil, and produces a tree with a soft, succulent bark, smooth and shiny. A recent visitor to the estate says: "Most of the sun grown trees that I saw had a hard scaly bark, very different from the shade protected tree."

Taxicabs Bring a New Demand for Tires.

SUCCESS OF THE TAXICAB IN NEW YORK.

AT a meeting in London on May 20 of the company operating the taximeter motor cabs in New York, the service of which was begun in October of last year, it was stated that the business had been making a profit since December, and that 300 cabs were plying for hire. It was anticipated that the result of the first financial year, ending June 12, 1908, would prove very satisfactory. It soon appeared desirable to increase the number of cabs, but the financial stringency was not favorable to raising new capital. The directors, however, borrowed from some banking friends in Paris 5,200,000 francs [\$1,003,000] with which to purchase 400 additional cabs, and it was expected to have 700 in operation in New York by the end of this summer.

The London company was incorporated as The New York Motor Cab Co., Limited, but this name could not be used in New York and at the meeting on May 20 it was resolved to change it to The New York Taxicab Co., Limited, to correspond with a name already registered and in use in New York. It was resolved also to authorize the creation of new capital shares to the extent of £300,000, to be issued as required. The original capital was £303,000 [= \$1,474,594.50], contributed in equal portions by capitalists of London, Paris and New York.

The New York Taxi-Cab Co. are operating in New York under a state charter granted May 10, 1907, to Harry N. Allen and others, of New York.

The cabs now operated by this company were made by A. Darracq & Cie., of Suvesnes, France, and of the 14-16 H. P. four cylinder landaulette type, weighing 2,530 pounds complete, and costing in New York, duty paid, \$2,600. The taximeters used are made under the Popp patents by the Société Générale des Compteurs de Voitures, of Paris. While all of the cabs so far imported have been brought in complete with bodies, the additional cabs ordered by the New York Taxicab Co. will be shipped in chassis only, and bodies for them will be built in the United States, where a dozen or more automobile firms already are prepared to engage in such work.

Pneumatic tires are supplied to the New York Taxicab Co. on mileage contracts, each tire being numbered, and a representative from the contracting tire company checks the record of the mileage run. The company are building a garage to hold 800 cars, and to be completed by September. A convenience connected with their service is a system whereby any person desiring to call a cab may telephone from any part of the city to a central office, whence the order is transmitted by the company to the cab station nearest the intending patron.

One other important taxicab service in New York is that of the New York Transportation Co., controlled by and supplementing the street railway system of this city. They have in operation 50 cabs made by the Société des Automobiles Delahaye, of Paris, in conjunction with some 400 electric hansoms and broughams of American make that have been in service for a number of years. The imported cabs, of the 8-10 H. P., two cylinder landaulette type, have been fitted with American tires and German "Cosmos" taximeters.

About a dozen smaller concerns have been incorporated, with capital stated at from say \$50,000 to \$500,000, to operate taxicabs in New York, but for the most part they are not yet actively in the field. Besides, taxicab services are being organized by hotels, restaurants, and the like, primarily for the benefit of their patrons.

AN AMERICAN TAXICAB INDUSTRY.

THE success of the French taxicabs on this side of the Atlantic has encouraged a number of American automobile firms to prepare for their manufacture. The E. R. Thomas Motor Co. (Buffalo, New York), are reported to have installed a plant and increased their force with a view to building 1,000 motor cabs this year, and it is understood that their product will be used by most of the companies organized lately to operate taxicab services in the leading American cities. The American Locomotive Automobile Co. (Providence, Rhode Island), were referred to recently as engaged in filling an order for 100 of those vehicles for the Waldorf-Astoria Hotel, in New York.

The fact that cabs have been in less demand in the past in American than in foreign cities, no doubt, has been due in considerable measure to the higher charges. Now that lower prices are coming in with the taximeter, it is possible that a reduction as regards the use of cabs is at hand, especially as the motor cab has notable advantages over the horse drawn vehicles. At any rate, not only the French manufacturer already referred to on this page, but other foreign companies are seeking a market in America.

Not the least interesting feature of the introduction of the taxicab in American cities is the prospect that before long every detail of the vehicles used will be of American manufacture—chassis, bodies, tires, and even taximeters. Already at least two American taximeters have been brought out that give promise of finding a permanent place in the market.

TAXICABS IN EUROPEAN CITIES.

MR. R. J. MCCRERY, the veteran Dublin cyclist and now editor of *The Motor News* of that city, visited London in May and wrote in his paper of his astonishment at the enormous increase in the number of taxicabs to be seen in the streets as compared with the November preceding. "They seem to be everywhere and were very seldom standing idle. At the present rate of increase the horse drawn cab will soon be almost extinct in the metropolis." He learned that an excellent business was being done, and that some of the cab companies were making large profits. Mr. McCreedy points out numerous advantages on the part of the motor cab over the motor 'bus. "The latter," he says, "are so enormously heavy and cumbersome that the wear and tear are out of all proportion to the work accomplished, tires alone being consumed at a most alarming rate."

The General Motor Cab Co., Limited, of London, reported net profits for the six months ending November 30 last of £41,887 [\$203,843], with an average of 306 cabs on the road, or an average of 15 shillings [\$3.65] per day, six days in the week. For the most part the profits of London taxicab companies are not available in detail, but their shares, as a rule, command a premium, and an evidence of their success may be found in the "boom" in taxicab enterprises throughout Great Britain.

A recent report was that there were in use on the streets of Paris probably 2,250 taxicabs, of about twenty different makes, mostly French. The financial results are understood to have been satisfactory. The number of such vehicles in Berlin on a recent date was stated to be less than a few months previously, due to the failure of several operating companies that had entered the field with insufficient capital, but the most trustworthy data at hand points the growing popularity of the taxicab among those who once become accustomed to it.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent

THE important lawsuit of Huttenbach v. The North Western Rubber Co., Limited, is not yet finally disposed of, as the verdict given for the defendants by Mr. Justice Walton, in London, has been appealed against. While, therefore, not yet at liberty to comment on the main

PONTIANAK.

issues involved, I may remark that this case by no means stands alone as regards disagreement between buyer and seller of this comparatively new commodity. Though the North Western company have the reputation of being large buyers of pontianak in Europe, considerable sales are being regularly effected in other quarters, arbitration being resorted to in accordance with Liverpool custom when differences arise. Although I am by no means satisfied that chemical analysis could be usefully adopted in transactions with the ordinary brands of raw rubber, yet I think that in the case of Pontianak—or jelutong, or palendang, as it is now variously termed in Liverpool—analysis would be decidedly useful in settling the question of quality. At present the broker or arbitrator merely rubs up a bit of the stuff in his hands in order to judge of the quality. Its value is appraised according to its degree of plasticity or adhesiveness. If it crumbles to powder in the hand treatment, it is at once judged to be low quality. No doubt this test, which has convenience and speed for its recommendations, gives an approximate idea of the amount of rubber present, but it seems to leave rather too much to the personal equation of the operator. A broker to whom the suggestion of chemical analysis was made, replied that he would not give a fig for it. Quite possibly in the case of many transactions it would not be worth the trouble and expense, but there is no doubt that analysis would give accurately what the broker's test gives only approximately. The impurities, except water, which is certainly very variable, and as a rule only trifling in amount, and the proportion of rubber to resin, can be determined without difficulty as a useful index of quality. It is a common idea in some quarters that there is no rubber present, but this supposition finds no support, as far as the samples which have passed through my hands are concerned, at any rate.

IN THE report of the German Rubber Manufacturers' Central Verein, I note that Dr. Dittmar advocates the establishment of a technical school for the rubber trade. He is ready, it appears, to take up the duties of the directorship thereof, presumably on terms, though this consideration is not referred to. A technical school devoted wholly to the interests of the rubber trade seems rather a large order, and I am not at all sure that such an institution is necessary or desirable. At any rate, before proceeding to this extremity, one would have thought that classes or instruction of some sort would be given at existing technical schools. I don't know what has been done in America, but in England the rubber manufacture is not yet included in the long curriculums now established at the leading technical schools. It has certainly been suggested by some British enthusiast that we should have a special establishment for training rubber chemists, but I should like to know what is to become of the product, seeing that only two or three appointments are available a year, and some of these at salaries which are anything but tempting. Germany, I understand, is now viewing with some degree of alarm the very large increase in the number of university students in recent

years, and the overcrowding of all the professions. If the education enthusiasts in this country had their way, we should soon be on the decline, as despite the introduction of labor saving machinery, nearly 80 per cent. of the productiveness of the country comes from manual labor. In nine cases out of ten the object of seeking higher education is in order to command higher payment. This end is attainable when there are only a few in it, but when large numbers are educated up to professional standards the natural thing is that employers take advantage of the competition and offer very disappointing rates of pay. This is what is now going on all over England. But not to dwell too much on the general, it would be interesting to know who the rubber technical school is to educate, and who is to benefit most from it. It is a common saying that educated workmen are not wanted as long as they can do their work all right, and as the essence of success in the rubber business depends upon details, including changing markets, which could not receive proper attention at a school, it is pretty clear that the graduate of the school would have to begin over again at the factory when he got his appointment. Hence it would seem that, in view of the limited amount of really useful information which is to be obtained outside the factory, the establishment of a branch in connection with rubber at an existing technical school is all that the situation warrants, and although I may perhaps be too pessimistic, I do not foresee a particularly bright future for those who attend this special branch if their number is not kept within strict limits.

I must confess to not being familiar with the boot manufacture, though I am acquainted at second hand with the fact that large quantities of rubber solution—or cement, as I believe it is termed—is made in American factories, especially for use in the boot trade. Evidently a somewhat similar business is carried on in England, as I hear that quantities of special rubber solution are being supplied to British boot manufacturers by a German firm. This is said to be a special quality of solution, though I should not imagine that there can be anything about it which debars home rubber works from supplying it on equally advantageous terms. The other day I had an inquiry from Spain for a process of making boots from cardboard. It was pointed out that the particular town was characterized by sunshine and bombs, and that the strong English leather boot was not really an essential. I was unable to give the information required, but should think that rubber cement would be useful in a cardboard boot.

ALTHOUGH owing to the fall in price of raw rubber at the end of last year, a reduction in the price of tires was quite natural, other influences besides a wish to benefit the public have prompted the actions of the principal tire manufacturers in the reductions which have taken place. To put it bluntly, there has been an internecine war on the part of certain firms to recover business lost to successful competitors. That where one firm has announced a 10 per cent. reduction, another has responded with a still further reduction, and so the thing has gone on until it is now generally recognized that the policy is a somewhat suicidal one. If the price of rubber had been the sole factor in causing these reductions, one would expect an announcement of higher prices, now that markets are up again, but this is not

RUBBER SOLUTION.

TECHNICAL SCHOOL FOR THE RUBBER TRADE.

MOTOR TIRE NOTES.

to be expected just yet, though I think it may be taken that no further reduction will be made. Of course, the motorists have benefited always, supposing that there has been no reduction in quality, but the advantage to the trade is not so apparent. In fact, one dealer is emphatic that instead of buying tires eagerly when the reduction is announced, the motorist decides to wait for a further reduction, and that this frame of mind has been all against the expected accession of business.

I hear nothing but glowing accounts of the progress made by the Kempshall tire in popular estimation, and this in spite of their price being considerably above that of the well-known makes, which have been so long on the market. As previously mentioned, this tire is made solely by Messrs. Charles Macintosh & Co., Limited, though it is quite distinct from their well-known Macintosh tire.

The Collier beaded edge tire is now being made with a rubber nonskid, the extra cost of this tire over that of the ordinary round tread cover being from all accounts amply justified. With regard to the nonskid question generally, it seems to be the fact that the all rubber nonskid tread is knocking out the metal studded form, and it seems a fairly safe surmise that in two years' time the metal studded tire will have become almost extinct. This does not apply to the chain attachment, as I understand these are still in considerable demand. What we shall probably see in a year or two hence will be the rubber nonskid in general use with the chain attachment in demand where the exigencies of particular roads necessitate it.

If the weather was the factor of importance in the situation, the sales of tires should be in advance of last year, which was a very wet one. Business generally, however, is not so good and there will be less money to spend. Although we have had some weeks of fine hot weather, the late Easter seems to have established a record for cold and snow, a good many motorists having a rough time of it. I myself had the novel experience of spending the night at a farmhouse in Scotland, on account of tire troubles, impending darkness, and heavy snow. The farmer, by the way, was under the impression that rubber was dug out of the ground, an idea which was not based on reading a recent paragraph in *THE INDIA RUBBER WORLD* about a stratum of rubber having been struck at depth during boring operations.

DR. CARL WALTHER THIEL, F. I. C., whose retirement from the scientific staff of the Harburg-Vienna rubber works, at Harburg, was mentioned in the last

PERSONAL.

INDIA RUBBER WORLD, somewhere about a decade ago, was chemist at the Manchester works of F. Reddaway & Co., Limited, and made many friends in that district, who doubtless will be interested to hear of his recent move. On leaving Manchester he first took up an appointment at the Calmon rubber and asbestos works at Hamburg, proceeding thence to the well known Harburg company.

I NOTICE that a non rubber printer's blanket has been patented by Messrs. Harris Markus and Edward Turner Whit-

DROYLSDEN RUBBER WORKS.

clow. The new blanket is built of layers of woven cloth and a composition of glue, water, and vegetable oil, and is said to withstand the deleterious action of printer's ink better than is the case with the ordinary rubber blanket. The position is somewhat analogous to that in the card cloth manufacture, where composition cards containing glue are now made specially for use in woollen carding machines where the oil acts upon the rubber cards. With regard to the patentees, they are both connected with the Barnewell Machine Co., Limited, now located at the Droylsden Rubber Works, near Manchester. These works were founded over

30 years ago by Thomas Worth, and were known under his name. Later they became the Droylsden Rubber Works, which, on getting into financial difficulties, were sold at auction as a going concern to one or two men well known in the rubber trade in Manchester. They were not, however, worked regularly, and a year or two ago passed into the possession of the Barnewell Machine Co., with which Mr. Harris Markus, formerly of the Fleetwood Rubber Co., was identified. One of the specialties now being produced at Droylsden is Markalite, which is not exactly a substitute, but rather a binding material for use in rubber mixings.

OTHER BRITISH RUBBER NOTES.

CALLENDER'S CABLE AND CONSTRUCTING CO.

THE trading profits of Callender's Cable and Construction Co., Limited, for 1907 were £108,573, against £122,926 in the preceding year and £124,521 in 1906 (the best year in the company's history). The net profits came out at £35,835 [=£174,391], against £54,050 in 1906. The report ascribes to general business conditions the falling off in the company's trade, but points out that they probably had their full share of business to be done. Their two factories for cables and accessories were fairly well employed. A great improvement is reported in the working of the rubber works at Leigh, now owned by the company; the rubber trade has increased and a satisfactory profit has been made on the operations of that branch. The company paid £13,500 in debenture interest (from gross profits), £10,000 in preference dividends (at 10 per cent.), and £20,250 in ordinary share dividends (at 15 per cent.)—the same as for the two preceding years.

PROFITS OF BRITISH COMPANIES.

THE accounts of F. Reddaway & Co. (Manchester) for 1907 show a net profit, after providing for debenture interest, depreciation, etc., of £26,476 [=£128,845.50], out of which the directors recommended dividends of 6 per cent. on the preference shares and 2½ per cent. on the ordinary. The sum of £10,000 was added to the reserve fund, increasing it to £95,000. The amount of debentures outstanding has been reduced to £138,759.

Claudius Ash, Sons & Co. (1905), Limited, report that business was well maintained during 1907. The profit was £84,747, against £83,359 in 1906. The dividend of 5½ per cent. on the preference shares and 8 per cent. on the ordinary shares amounted to £52,820 [=£257,548.53], the same as last year. Added to reserve £20,000. The business is the manufacture and sale of dental rubbers and other dentist's materials.

DRIVING APRONS IN THE HOUSE OF LORDS.

THE British house of lords has been called upon to say the final word in a patent infringement suit relating to a motorist's driving apron—"particularly waterproof aprons, by which the driver's feet will be perfectly protected from rain." Robert Arnot, of Edinburgh, assignee of patent No. 16,509 (1902), on such aprons, sued the Dunlop Pneumatic Tyre Co., Limited, alleging infringement. The court decided that, were the patent valid there would have been infringement, but that the invention in question has been disclosed by an earlier patent. Arnot appealed to the house of lords, where the court decision was confirmed, and the appeal dismissed.

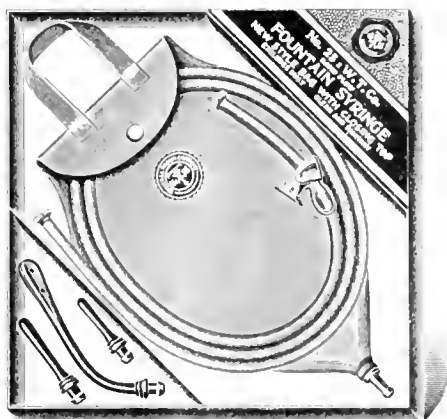
VOLEMITE.

A MEETING of the shareholders of Volenite, Limited, was to be held in London on June 3 to hear an account of the winding up, from the liquidator. About seven years ago, this journal, in mentioning a windup of the company and reconstruction then in progress, spoke of Volenite, Limited, as "making a fresh bid for popular favor in connection with a material into which Pontianak gum is said to enter largely."

New Rubber Goods in the Market.

FOUNTAIN SYRINGE BAG WITH CLOSING TOP.

A NEW syringe here illustrated is offered to the trade in the belief that it will appeal particularly to neat and dainty women. The ordinary open top fountain syringe, if left hanging in the bathroom for awhile, as often is the case, will accumulate dust and impurities inside the bag, which will be injected with the fluid when the syringe is again used. In

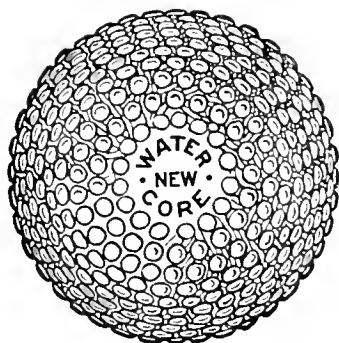


NO. 25 W. T. CO. RAPID FLOW FOUNTAIN SYRINGE.

the article illustrated the flap, with snap button closure, keeps out any dust or dirt, while the wide opening of the bag permits it to be turned inside out for thorough cleaning. The flap is also convenient as a holder for the tubing when not in use. The large handle is convenient for holding it as well as for hanging it up. This syringe is put up in an attractive box. [Whitall Tatum Co., New York.]

THE NEW KEMPSTALL GOLF BALLS.

THE distinctive feature in construction of a new line of golf balls is based upon the decision by the manufacturers that the action of a rubber cover in connection with a liquid center produces a livelier ball than has been made hitherto. At the same time the rubber or cushion cover is referred to as being exceptionally durable. The illustration relates to the Kempshall Water Core ball, concerning which golfers are reporting that with its use they are reaching greens in two strokes which previously required three. The newest product of the same company is the "L. C." or Liquid Center ball. In the center of each of the two brands is a small rubber bag filled with about 1 ounce of water, which is held under compression by rubber sheeting wound thereon under great tension. [The Kempshall Manufacturing Co., New York.]

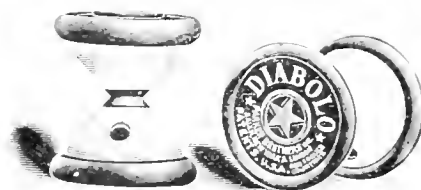


WATER CORE GOLF BALL.

RUBBER IN THE GAME OF DIABOLO.

ON account of the growing popularity of the game of Diabolo, in America as well as in Europe, there is a prospect that an important new demand for rubber will result. This is an outdoor sport suited to young or old, and one that can be played without any expense for laying out or equipping grounds. The outfit

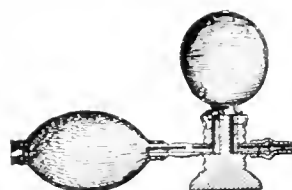
is not expensive and is easily carried in the pocket or in readiness. The outfit consists of a rubber band, a rubber ring, and a rubber ball, all of which are made of rubber. The rubber band is used for making popular a new game, based upon a well known Chinese game, which a French inventor, Gustave Philippe, has lately patented, the date in America being June 5, 1906. Different materials are used for the ball, and a rubber band for the ring, and a rubber band for the ball, but rubber is used



for capping the ball, and for the ring. The rubber aids in the perfect looping and increasing speed and protection of the periphery. The outfit varies in price from \$1 to \$12, according to the materials used in construction. [Parker Brothers, Inc., Salem, Massachusetts, and New York.]

MILLER'S PYROGRAPHIC DEVICE.

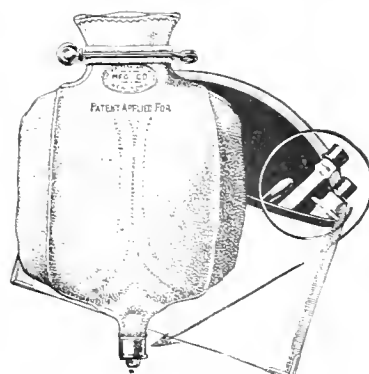
THE accompanying illustration will serve to indicate the principle of construction of a new pyrographic or caustery device. It comprises a pumping bulb provided with a valve; a member provided with a pair of projecting nipples, one receiving the pumping bulb and the other an eduction tube. The nipples referred to communicate with the detachable distensible storage bulb at the top of the device, as shown in the drawing. This apparatus, which has been referred to as superior to any other in its field, is the subject of United States patent No. 888,833, issued to Thomas W. Miller, Ashland, Ohio.



PYROGRAPHIC DEVICE.

"THE LITTLE WONDER" SYRINGE.

THE article here illustrated can be changed in a moment from a small handy hot water bag to an efficient and sanitary syringe. No other syringe on the market is so convenient in size, and



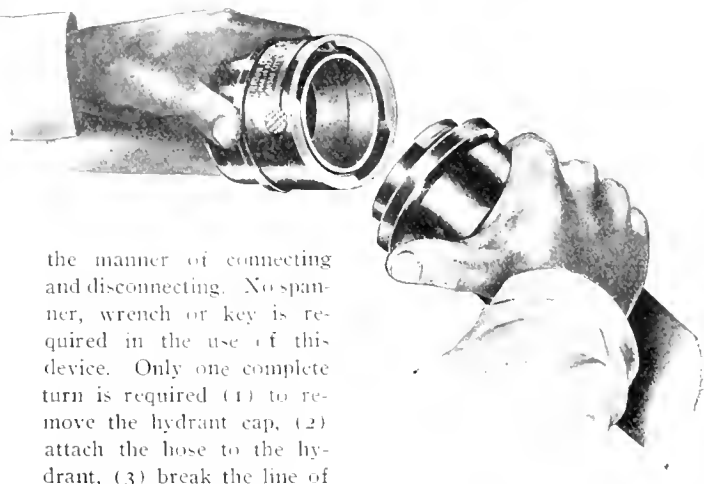
"LITTLE WONDER" SYRINGE.

it is equally light in weight. The steady and continuous flow of liquid through the tube, when in use, prevents any injection of air, and the manipulation by pressure of the hand controls perfectly the force of the spray. The large opening of the bag renders it particularly easy to keep clean. The "Little Wonder" can be folded in a fine moisture proof silk case, 6 x 6 3/4 inches, easily carried in

the pocket or traveling bag. The clasp by which the mouth of the bag is closed is one of the special features of the invention here described. [The Western Specialty Manufacturing Co., Flatiron building, New York.]

THE ANDERSON FIRE HOSE COUPLER.

A NEW device which has been adopted by very many fire departments is the Anderson patent coupling. This is made standard, but can be supplied to fit any equipment now in use, and the system is referred to as being in use in more than 1000 towns and cities. The cut shows the coupler attached to the hose and



ANDERSON COUPLER.

the manner of connecting and disconnecting. No spanner, wrench or key is required in the use of this device. Only one complete turn is required (1) to remove the hydrant cap, (2) attach the hose to the hydrant, (3) break the line of hose, and (4) put on the nozzle ready for water. But with the average screw coupling and screw hydrant as many as 20 complete turns are required. In addition to the ease of working the Anderson coupler and the saving of time through its use, the connection is sure, and the greater the pressure the tighter the joint. The Western trade is supplied by the Anderson Coupling and Supply Co., Kansas City, Kansas. [The Eastern Coupling Co., Camden, Maine.]

"VELVETEER" EAR AND ULCER SYRINGE.

THE "Velveteer" ear and ulcer syringe represents in its construction a departure from the usual American practice. It follows out the shape of the imported types, but has been improved by the addition of the pure gum tip. The object of this



THE "VELVETEER" SYRINGE.

tip is to make the syringe soft and flexible at this point, so that it will readily follow the channel of the ear without irritation or undue pressure, and yet have sufficient body to retain its shape. It is understood to have met the warm commendation of a number of physicians. [The B. F. Goodrich Co., Akron, Ohio.]

THE "ADMIRAL" RUBBER SHOE.

THIS is a lightweight, self acting overshoe of the "invisible" type, the advantages of which are that it "holds tight" to the leather shoe. It is not only exceedingly light, but can readily be put upon the foot without stopping. This shoe, or sandal, differs from others in the market in that instead of having "an endless non-stretchable cord extending entirely around the overshoe"

(and thus extending around the heel), it has a flexible but inelastic strip embedded in the vamp above the sole and extending upward at the ends above the shank, forward of the heel. This

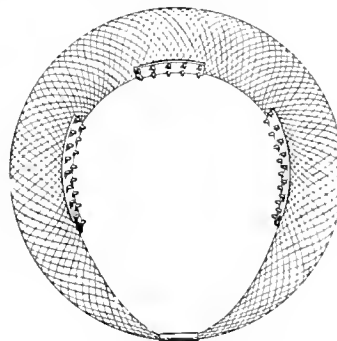


THE "ADMIRAL" OVERSHOE.

shoe is protected by United States patent No. 875,144, granted to Augustus O. Bourn. [The Bourn Rubber Co., Providence, Rhode Island.]

RUBBER GRIPS INSTEAD OF COMBS.

THE annoyance which ladies experience from the slipping of combs may be avoided, in certain circumstances at least, by the



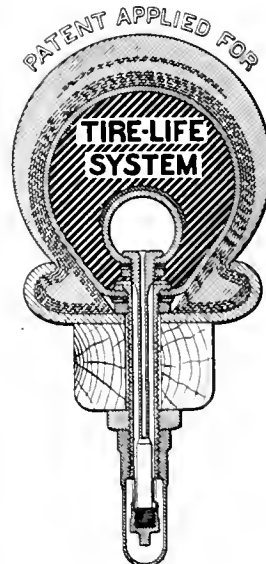
"CAN'T SLIP" POMPADOUR.

use of the Can't Slip Pompadour. Reference to an accompanying cut will show that the inside of the braided wire roll is provided with three series of projections or points. These are rubber grips, the gentle pressure of which is referred to as holding the roll securely in place. The roll does not slip or slide—as combs so often do—but stays where it is put. Besides, these rolls are light in weight and in every way,

comfortable, and are reported to be having a very large sale. [The Thomas P. Taylor Co., Bridgeport, Connecticut.]

A NEW TIRE FILLER.

THE "Tire Life" system for tires is the combination of a resilient compound and a small pneumatic tube. It is designed to possess the desirable features of both the solid and the pneumatic tire, without the drawbacks of either. "Tire Life" is described as a compound which, when injected in the inner tube of a tire in a warm liquid state, sets in a few hours, forming a firm but very elastic fit in the shoe. The pneumatic tube may be inflated or deflated as desired, being provided with an air valve which passes through the filling tube. The tube is placed in the tire at the greatest distance possible from the ground, and is therefore fully protected. [Tire-Life Co., No. 66 West Forty-third street, New York.]



GEORGE F. KEHEW, for many years connected with the Pope Manufacturing Co. and earlier with the cycle trade, has gone with the National Sales Corporation (No. 296 Broadway, New York), dealers in automobile accessories and American representatives of Pirelli & Co., the rubber manufacturers of Milan, Italy. Mr. Kehew will maintain headquarters at Detroit, Michigan.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED MAY 5, 1908.

NO. 886,423. Packing composition for seams of cans. L. C. Sharp, Plattsburgh, N.Y., assignor to American Can Co., New York city.

886,482. Substance produced from the gums of certain *Sapotaceæ*. M. M. Dessau, Merton, England.

886,716. Shoe. P. G. Mayhew, Grand Rapids, Mich.

886,798. Fire hose bridge. R. C. Groh, assignor of one-third each to F. Seifert and S. H. Reeves, all of St. Paul, Minn.

886,835. Means for attaching pneumatic tires. A. C. Miller, Chicago.

886,889. Handle grip for cycle handle bars. M. C. Stokes, Hartford, Conn., assignor to The Hartford Rubber Works Co.

Trade Mark.

33,200. National India Rubber Co., Bristol, R. I. The representation of an arrow and an anchor, within a circle surrounded by the words *National India Rubber Co.* For rubber buckets.

ISSUED MAY 12, 1908.

887,295. Automobile tire. W. Weidling, Magdeburg, Germany.

887,454. Dress shield. D. Basch, New York city.

887,687. Dress shield cover. M. L. McConn, Arkansas City, Kan.

Trade Mark.

29,016. Standard Underground Cable Co., Pittsburgh, Pa. The representation of a section of an insulated cable, having a green strand interwoven in the cover. For rubber covered electric conductors, and conductors covered with brand.

ISSUED MAY 19, 1908.

887,941. Low cut or sole rubber overshoe. F. C. Hood, Boston.

887,997. Vehicle tire. E. R. Cadwell, Detroit, Mich., assignor of one third each to F. Johnston and F. M. Ashley.

888,165. Hose coupling. T. H. Harrington, Wilmot, Ark.

888,214. Tire for the wheels of road vehicles. J. V. F. A. Yberty and E. B. Méricux, Royat-les-Bains, France.

888,252. Holding device for rubber shoes. F. P. McAulay, Grafton, N. D.

888,269. Cushion tire for road vehicle wheels. J. Stevens, London, England.

888,302. Wheel tire. F. N. Boughn, Riverside, Cal.

888,345. Pneumatic tire. H. Muselow and W. A. Roberts, Vancouver, Canada.

Trade Marks.

28,374. Osgood Sayen, Philadelphia. The word *Midnight*. For rubber flange packing.

28,376. Osgood Sayen, Philadelphia. The word *Auto*. For rubber packing.

32,152. The Bridgeport Brass Co., Bridgeport, Conn. The words *Phono-electric*. For insulated wire.

32,484. The Bridgeport Brass Co., Bridgeport, Conn. The word *Electric*, lettered in white on a dark background.

32,933. Mica Insulator Co., New York city. The word *Linolac*. For electrical insulating compound.

ISSUED MAY 26, 1908.

888,500. Hose. E. J. Coughlin, Passaic, N. J., assignor to The New York Belting and Packing Co., Ltd.

888,674. Connecting conductor for cables. F. S. Viel, Pittsburgh, Pa., assignor to Standard Underground Cable Co.

888,833. Pyrographic or cautery device. T. W. Miller, Ashland, Ohio.

888,906. Cushion tire. J. B. Jordan, Nashville, Tenn.

889,038. Bracket hose reel. L. W. Parker, Mobile, Ala.

889,069. Pneumatic tire. C. E. Titus, Springfield, Mass.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1907.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, APRIL 20, 1908.]

531 (1907). Pneumatic tire with metal protecting band. W. S. Gage, Paris, France.

527 (1907). Inflatable blocks for the use of hairdressers and the like. H. Lichtenfeld, London.

534 (1907). Spare wheel for motor cars. S. Simpson, Exeter.

558 (1907). Detachable rim for pneumatic tires, and for solid tires in single or twin form. G. J. Rackham, London.

574 (1907). Nonskidding device for tires. E. Wyld, Shepperton-on-Thames.

584 (1907). Key for removal of flange of a tire rim. K. Henning, Weissenec, Germany.

*616 (1907). Apparatus for withdrawing wires from tires and inserting new ones. J. Hart, Washington City.

671 (1907). Tire forming shoe. A. E. Vincent, Noisy-le-Sec (Seine), France.

732 (1907). Nonskidding cover for tires. F. T. Edmunds, Parkstone, Dorsetshire.

755 (1907). Fast tire. J. Duff, London.

771 (1907). Tire charged with water or other nonviscous liquid mixed with air or other gas. R. K. Gray, Stretton, London.

799 (1907). Pneumatic tire consisting of a series of bent ended single tube segments. H. Lockman and W. Bates, Luton, Bedfordshire.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 6, 1908.]

845 (1907). Elastic tire material for golf ball cores made from animal connective tissue, such as catgut ligaments. G. Hoffmann, Bradford.

852 (1907). Golf ball. M. McDavid, Edinburgh.

859 (1907). Sectional tread band for tires, built up in part of hemp or other fiber. E. Rollinger, Chiswick.

858 (1907). Solid elastic tire tread of a pneumatic tire formed of open mesh woven fabric, cut bias. J. S. McGeehan, London.

884 (1907). Boot heel having enclosed a hollow cushion of rubber and felt. H. Goodacre, New Plymouth, New Zealand, and two others.

893 (1907). Method of utilizing waste rubber; the process is applicable also for coating or repairing tire treads. W. Price, Liverpool.

*946 (1907). Disk shaped rotary eraser for typewriting work. B. J. B. Mills, London. (Richard Labor, New York.)

1,207 (1907). Apparatus for making tire covers. C. Hubbard and C. Macintosh & Co., Ltd., Manchester.

1,208 (1907). Apparatus for mudding tires. Same.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 13, 1908.]

1,295 (1907). Material for tire covers, belting, and the like, made by combining fiber and rubber, and vulcanizing them together. M. Staumann, Frankfurt a. M., Germany.

1,298 (1907). Clip for securing rubber hose to metal pipes. A. E. S. Craig, Caversham.

1,310 (1907). Playing ball with pockets which permit the insertion of a playing member such as a foot, spoke, etc. D. Marshall, Cheltenham.

1,316 (1907). Tire rim available for either a wired on or beaded edge cover. B. Blundstone and D. Moseley & Sons, Ltd., Manchester.

1,459 (1907). Non slipping device for tires. A. J. Boulton, London. (L. Mangold, Cassel, Germany.)

1,508 (1907). Solid tire. Mitteldeutsche Gummiwaren-Fabrik. L. Peter A. G., Frankfurt a. M., Germany.

1,584 (1907). Detachable tire rim. E. Gerbert, Waltershausen, Germany.

1,648 (1907). Non skidding device for tires. J. R. Triggwell, Streatham.

1,746 (1907). Tire cover with special tread. P. Lansade-Desprez, Lyons, France.

1,753 (1907). Method of attaching pneumatic tires. F. Shaw, Durham, and two others.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 20.]

1,942 (1907). Tire tread. G. E. A. Holdsworth, London.

1,956 (1907). Pneumatic tire with protecting metallic section. E. Kampshall, London.

1,967 (1907). Method of attaching pneumatic tires to rim. R. Chiganne, Paris, France.

2,065 (1907). Artificial rubber for filling tires, making toys and the like. Consists of glue, molasses, glycerine and tar. W. H. Brownlow, Brockville, Ontario.

2,146 (1907). Pneumatic tire with protective band between air tube and cover. F. J. Moran and R. P. Fletcher, Birkenhead.

2,147 (1907). Pneumatic tire. F. A. Ellis, Kennington.

2,157 (1907). Pneumatic tire. A. McLean, Hawkes Bay, New Zealand.

2,177 (1907). Non skidding stud for wheel tires. A. Slack, Sheffield.

2,210 (1907). Spring wheel with hub suspended from the rim by means of flexible and rubber elements. L. A. Garchey, Paris, France.

2,253 (1907). Pneumatic tire. W. H. Bird, Wanganui, New Zealand.

2,270 (1907). Non slipping attachment for tires. J. H. Tottie, St. Leonards-on-Sea.

2,289 (1907). Use of eucalyptol for purifying rubber. F. W. Passmore, London.

2,313 (1907). Non-skid stud for tires. C. Payne, Cranbrook.

2,320 (1907). Pneumatic tires. A. C. Clements, Bristol.

2,324 (1907). Tool for applying or removing pneumatic tires. J. F. Pease and J. G. Patterson, Darlington, Durham.

2,338 (1907). Heel protectors. G. L. Porter, Leicester.

2,409 (1907). Pad for boot heel, the feet of furniture, and the like. W. Plowright, Manchester.

2,458 (1907). Golf ball with plastic core. P. A. Martin and J. Stanley, Birmingham.

THE FRENCH REPUBLIC.

Patents Issued (with Dates of Application).

383,431 (Oct. 30, 1907). F. A. Lart. Elastic tire.

383,443 (Oct. 30). Boirault and Boucher. Elastic tire.

383,476 (Oct. 31). F. Reddaway. Pneumatic tire.

383,410 (Oct. 29). F. Kempter. Washing rubber.

383,512 (Jan. 9). P. E. Vuitton. Tire protector.

383,518 (Oct. 19). G. A. B. Bayonne. Vulcanization of tire repairs.

383,602 (Nov. 5). H. J. Scott. Pneumatic tire.

383,645 (Nov. 6). Morrison and Morse. Tire.

383,552 (Jan. 10). Rouxville. Vulcanizing process.

383,622 (Nov. 5). F. Boeckel. Process and apparatus for extraction of rubber.

- 383,660 (Jan. 14) J. Dupont. Treatment of waste rubber.
 383,404 (Sept. 23) F. Meyer. Pneumatic tire.
 383,715 (Jan. 24) F. Feldhans. Elastic tire.
 383,754 (Nov. 8) E. Remier. Tire protector.
 383,757 (Nov. 8) C. A. Mauselm. Tire protector.
 383,702 (Nov. 9) H. Daigneux. Attachment of leather protector to pneumatic tires.
 383,847 (Jan. 18) P. J. Viel. Pneumatic tire.
 383,852 (Jan. 19) L. A. Garchey. Elastic tire.
 383,908 (Nov. 13) C. Martean. Elastic tire.
 383,911 (Nov. 13) J. F. Palmer. Pneumatic tire.
 384,034 (Jan. 23) Société Michelin & Cie. Pneumatic tire.
 384,061 (Nov. 16) S. Gonillardon. Vulcanization of tire repairs.
 384,107 (Jan. 23) Donnadieu. Pneumatic tire.
 384,202 (Nov. 21) E. M. L. Torkington. Pneumatic tire.
 384,225 (Nov. 21) A. Debagne. Spring wheel and elastic tire.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, postpaid.]

TURPENTINE AND THE RUBBER INDUSTRY.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The forest service of the United States department of agriculture is undertaking certain lines of work in the South with the object of standardizing and grading the products of the turpentine industry. In connection with this investigation it is desired to establish a complete list of manufacturing concerns that use turpentine in large quantities. Statements are found to the effect that turpentine is much used in the caoutchouc industries; also that yellow pine oil is employed as a solvent. The information, however, is not definite. The service would appreciate any data on this subject which you may be willing to place at its disposal. Very truly yours,

R. S. KELLOGG, Chief.

Washington, June 6, 1908.

[VERY little turpentine is used to-day in the rubber industry. A few barrels a year may be used in certain varnishes, but the amount is so small as to be hardly worth looking up. The same is true of yellow pine oil. In the early days of the rubber manufacture, before the discovery of vulcanization, turpentine was very largely used as a solvent of rubber. To-day the solvent largely used is naphtha.—THE EDITOR.]

RUBBER FOR ARMY BALLOONS.

THE United States army signal service recently called for bids for the construction of two balloons for army use, one to have a capacity of 1,000 cubic meters [=35,316 cubic feet] and the other 540 cubic meters [=19,070 cubic feet]. A letter to THE INDIA RUBBER WORLD from the chief signal officer says:

"The specifications provide that the material for the gas bags will be made of a fabric of American manufacture, made by rolling together two layers of silk having a layer of rubber between. No specification for this material has been prepared. It is manufactured in a great variety of forms in Europe, but in the United States it is a new industry. This office has been informed that some rubber manufacturers in the United States have made satisfactory samples, and other manufacturers are interested in the subject if there is prospect of a market. It is with a view of developing this industry in the United States that the specifications for balloons calls for material made in the United States."

RUBBER FOR AIRSHIPS.

ACCORDING to descriptions to hand of the "Republique," the successor to the lost French airship, "La Patrie," the new ship will measure 231 feet in length and 45 in width. The capacious measurement will be covered with a "skin" made of thin, but exceedingly strong, yellowish cloth, covered with a preparation of caoutchouc. However thin, therefore, the caoutchouc or rubber coating be laid on, the quantity used must be considerable, and, should the use of airships increase, the demand for rubber

suitable for coating "skins" will increase accordingly, especially if the "Republique" proves a success.—*Tropical Life*.

THE LATE MONROE SEIBERLING.

FOR various reasons the name of Monroe Seiberling will pass down into the manufacturing history of the central West as a leader, and in some ways the leader, aside from his considerable rubber interests. After living 28 years on the



MONROE SEIBERLING.

farm upon which he was born in Summit county, Ohio, he went to Akron, where he engaged in the manufacture of flour, strawboard, and other commodities. He had the perception to see correctly the advantages of new and untried fields of manufacture. At the beginning of the use of natural gas in Indiana he was the first to take advantage of its utility, and built plate and window glass works at Kokomo and other places in

that state, all of which were large, for Monroe Seiberling always had a decided aversion to anything on a small scale. After the celebrated McKinley tariff bill was passed he was the first, or one of the first, to build a tin plate mill, from the ground up, in the United States, and operated it successfully.

It was owing to his foresight and determination to take the initiative that he started a number of his manufacturing enterprises, notably the Indiana Rubber and Insulated Wire Co., at Jonesboro, Indiana, which has been in successful operation from the start, many years ago. In 1866 he organized and started the Peoria Rubber and Manufacturing Co., of Peoria, Illinois, of which he was president and general manager, and surprised everyone who knew him by the marked success he made of his "Peoria" tire, during 1866 and 1867—a line of business of which no one credited him with knowing anything. The Peoria plant was situated a mile from the nearest street car line, but a small affair like that did not bother Mr. Seiberling, and he promptly built the shortest steam railroad in the United States. He certainly believed in the old saying that difficulties were only made to be overcome and he was unique in the task of overcoming them.

Mr. Seiberling died February 25, 1908, at his home in Oak Park, Illinois, at the age of 60. He is survived by eight sons and daughters—Mrs. Charles J. Butler, of Detroit, Michigan, whose husband is president of Morgan & Wright; Mrs. F. L. Kryder, Akron, Ohio; Ella S. and Grace Seiberling, Oak Park, Illinois; and the sons, Alton Grant, Kokomo, Indiana; Fred A., Oak Park, Illinois; Laird H., Marion, Indiana, and George W., Detroit, Michigan.

BRITISH COLUMBIA newspapers report the successful issue of a suit brought by the Dunlop Tire and Rubber Goods Co., Limited (Toronto), against certain parties in that province who were alleged to have infringed the Dunlop patent on pneumatic bicycle tires.

THE EDITOR'S BOOK TABLE.

GOUVERNEMENT GENERAL DE L'AFRIQUE OCCIDENTALE FRANÇAISE. Rapport Agricole pour l'Année 1906. Par Yves Henry. Paris: Augustin Chalmel. 1907. [Paper 8vo. Pp. 310.]

THE modern French colonial service appears to be based upon an exceptionally intelligent system, and though it has briefer history than the colonial administrations of some other powers, good results have been realized and constant improvement is apparent. The economic developments of the colony is always to be kept prominently in mind, and at the same time the administrators work without friction with the natives, whether in Africa or in the Far East. Notable work has been done by Monsieur Yves Henry, director of agriculture for the colonies and inspector of agriculture for French West Africa. The present volume, relating to the work in the latter administration, devotes no little space to the subject of rubber—the native and exotic species, the work in experimental gardens, the planting stations established, and other like matters. French West Africa is rich in rubber, both as to the number of species of value and the area covered by them, and already this region yields an increasingly large amount for export—now equal at least to the output from the Congo Free State. The purpose of the government is to extend this production, while conserving the native trees and plants, and also to stimulate the rational planting of rubber, one means to which has been the establishment of practical rubber planting schools. Monsieur Henry has been in charge of this work for a number of years, and what he has accomplished entitles him to be regarded as among the most notable workers to-day in the field of intelligent exploitation of crude rubber.

MORE A STUDY OF FINANCIAL CONDITIONS NOW PREVALENT. By George Otis Draper. Second edition. Boston: Little, Brown & Co., 1908. [Cloth. 12mo. Pp. 1 + 246. Price, \$1.]

THE majority of financial literature, says the author of this book in his preface, is written by men who have never made actual value in product, never handled material funds, never known the peril in large financial risks, the joy of substantial material success, or the bitterness of severe financial loss. Mr. Draper, long known as the secretary of the Draper company, of Hopedale, Massachusetts, is at least a man of practical training in a good school. His book, instead of being a treatise, is a series of plain talks on business based upon experience, and forms a readable book, whether from the standpoint of wage earner, or wage payer, or buyer or seller. Naturally every man who works wants more for his effort, every man who buys wants more for his money, every man who owns property would like to add to it. What is the condition of life, therefore, that gives to every class what it seeks within the bounds of reason, and at the same time does not take unjustly from any other class. Mr. Draper has offered no sure rule for bringing about this ideal condition, but the reading of his book would help most people no doubt to a clearer understanding of many of the problems involved in present day business and industry.

ZUR GESCHICHTE DER KAUSCHUKFORSCHUNG. Zusammenstellung der Wissen schaftlichen Veröffentlichungen aus dem Gesamtgebiet des Kautschuks. Von A. Slingervoet Ramondt. Dresden: Steinkopff & Springer. 1907. [Paper. 8vo. Pp. 70.]

THIS brochure may be described as a contribution to the history of scientific research regarding india-rubber, in the shape of a compendium of the scientific publications covering all subjects relating to rubber. The author is connected with the chemical laboratory of the technical high school at Delft. There are chapters on the nature and treatment of latex, the physical and chemical characteristics of rubber, vulcanization, analyses, and so on. It is a compact resume of facts and suggestions, with no fewer than 330 references to authorities, a list of which fills 13 pages at the close of the work, embracing publications as recent as the end of 1907. A useful reference book for any one interested in further research work on rubber who is familiar with German.

RUBBER PLANTING IN MEXICO AND CENTRAL AMERICA. By Pehr Olsson-Seffer, Ph.D. [Reprint from *The Agricultural Bulletin of the*

Strait and Federal Malay States. Singapore: Kelly & Walsh, Limited. 1907. [Paper. 8vo. Pp. 11.]

SEEKING RUBBER IN BOLIVIA AND OTHER ELASTIC EXPERIENCES. By Quincy Tucker. [Reprint from the *Boot and Shoe Recorder*.] Boston: J. Mass. The Author, 1908. [Paper. 8vo. Pp. 42. Price, \$1.]

IN CURRENT PERIODICALS.

LES Productions Végétales des Colonies Françaises. Produits d'Exsudation. Caoutchouc. By F. de Charabot. [Relates to rubber producing species in the French colonies, particularly in Africa, with statistics of production.]—*L' Agriculture pratique des pays chauds*, Paris. VIII:59 (Feb. '08). Pp. 95-114.

Constitution de Poussiniers de Caoutchouc en Afrique Occidentale. By Yves Henry. [Relates to the progress of planting rubber in French West Africa.]—*L' Agriculture pratique des pays chauds*, Paris. VIII:59 (Feb. '08). Pp. 126-141.

Gara Rubber in Portugal—East Africa. [By W. H. Johnson.]—*Bulletin of the Imperial Institute*, London. V.4 (1907). Pp. 431-422.

Un Arbre à Caoutchouc dans le Nord du Tonkin. [*Ischebodea Fokienensis*.] By O. Lahnay. *Journal d'Agriculture Tropicale*, Paris. VIII:79 (Jan. 31, '08). Pp. 12-18.

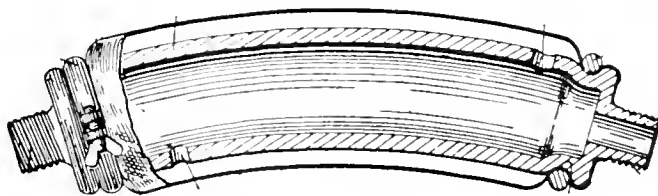
Ueber die Gewinnung von Kautschuk aus getrockneten Kautschukpflanzen. By Dr. Paul Alexander and Dr. K. Bing. *Der Farnpflanzer*, Berlin. XII:2 (Feb. '08). Pp. 17-18.

A NEW ORGAN OF THE OIL TRADE.

IN view of the excellence of the French journal *Le Caoutchouc et la Gutta Percha* it was to be expected that a new journal emanating from the same offices would give evidence of the same high standard of editorship. The first issue of such a new journal, *Les Matières Grasses*, dated May 25, an organ of scientific and industrial interests, covers a wide field, while the list of contributors announced includes experts in connection with the various oils, resins, glues, soaps, varnishes, dyes, colors and so on—in respect both to their sources or component materials and their preparation and industrial uses. The names of several of these writers, either as chemists or as botanists, are familiar in the literature of india-rubber; for example, Dr. De Wildman, an authority on African rubbers, who deals with palm oil. The market and trade reports are particularly full. The publisher and editor is Monsieur A. D. Cillard fils, 49, rue des Vinaigriers, Paris. The terms are 20 francs yearly in France and 25 francs abroad.

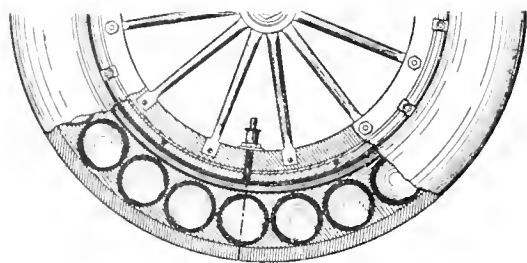
FLEXIBLE MOLDS FOR TIRE WORK.

IF an indestructible flexible mold could be evolved it would find a very wide use. Of course, the cloth used in wrapping hose and tubing is of the nature of a mold and has been in use for many years, but it burns up in time. No doubt it has been suggested many times that if, instead of wrapping this around the hose, it could be woven in several plies and slipped on and off, it would save much time. That,



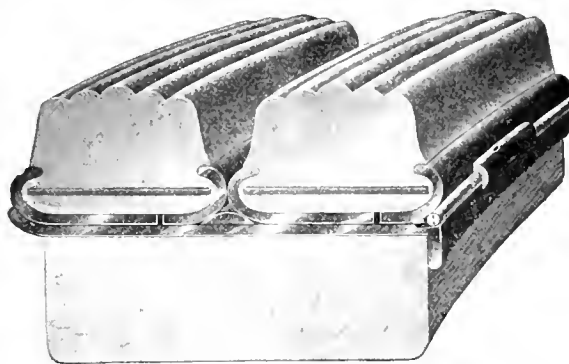
FROST'S TIRE VULCANIZING MOLD

however, would be thoroughly impractical. In the line of tire repairers, however, something of this sort has been attempted and is apparently successful. Harvey Frost & Co., of London, who are patentees of very many types of vulcanizers for tire repair work, have brought out a flexible mold which is really a short tubular canvas jacket arranged to go over the tire, the ends to be bound down by metal clamps. Inside of the jacket is the tire cover, inside of that in turn is a metal mandrel made on a slight curve, with openings allowing the steam to be let between mandrel and the cover.



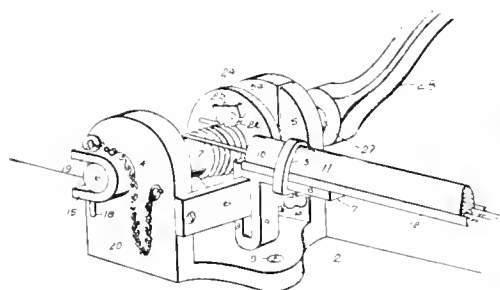
BALL BEARING TIRE.

[Ball Bearing Tire Co., Providence, Rhode Island.]



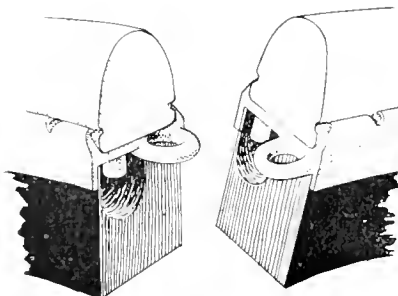
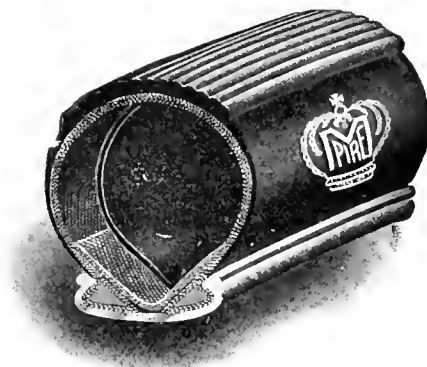
SECTION SWINEHART DETACHABLE RIM.

[The Swinehart Clincher Tire and Rubber Co., Akron, Ohio.]



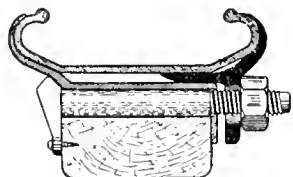
TIRE WIRE PULLING MACHINE.

[Patent of John A. Barbrake.]

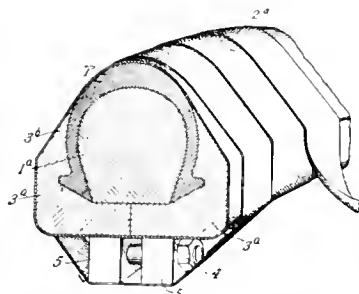
"HALF NELSON" EMERGENCY.
TIRE.

EMPIRE MOTORCYCLE TIRE.

[Empire Automobile Tire Co., Trenton, New Jersey.]

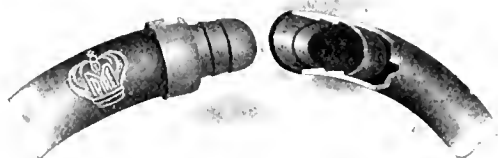


MICHELIN DEMOUNTABLE RIM.



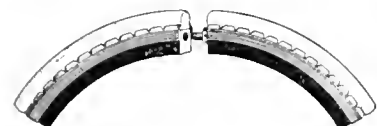
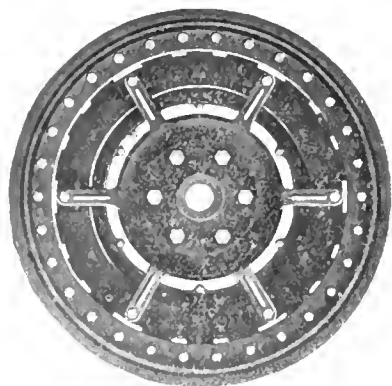
TIRE VULCANIZING PROCESS.

[Patent of Charles L. Pepper.]

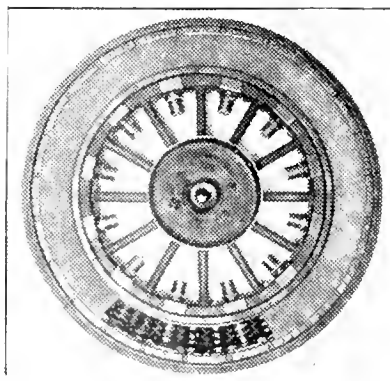


EMPIRE MOTOR CYCLE TUBES.

[“Empire” tubes made of gray rubber, standard weight; “Empire Peerless” tubes, in red rubber, are heavier.]

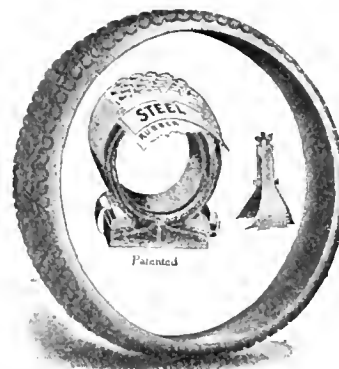
MAKING THE JOINT WITH THE "HALF
NELSON."

RUTHERFORD PNEUMATIC WHEEL.



A PNEUMATIC WHEEL.

[The Flexible Tire Co., Springfield, Massachusetts.]



WHEELER'S STEEL TIRE ARMOR.

Our Page of Tire Pictures.

THE Ball Bearing tire comprises a series of molded pockets, in which a series of balls is placed, in addition to an inner tube. The inner tube when inflated under 30 to 40 pounds pressure compresses the molded section and balls and gives the rigidity obtained from 90 pounds pressure on the ordinary pneumatic tire. The idea is that the puncturing of one or more balls does not impair the usefulness of the tire, as would the puncturing of an ordinary inner tube. In this case the inner tube is so far from the tread that it is practically impossible to puncture it. The molded casing and balls can be assembled, if desired, in any tire of standard make. An accompanying illustration shows the position of the balls. This tire is marketed by Ball Bearing Tire Co., Providence, Rhode Island.

* * *

A NEW tire-wire pulling machine comprises a frame with two standards thereon, an open bearing in one standard and a pivoted bearing in the other standard; a tapered spindle in the bearing adapted to be swung with the pivoted bearing to swing its free end out of the open bearing, and adjacent tire supporting bracket, and means for connecting the tire wire with the spindle. United States patent No. 881,651 has been granted for this invention to John A. Barbrake, of Canton, Ohio.

* * *

A NEW method of vulcanizing the covers of pneumatic tires consists in supporting the cover upon a core, clamping the cover in position on the core with the tread portion exposed, placing a porous covering over the exposed surfaces of the tire cover and in contact therewith, and subjecting the cover so supported and clamp to the process of vulcanization. A patent on this process has been granted to Charles L. Pepper, of Indianapolis, Indiana—No. 882,341.

* * *

THE Flexible Tire Co. (Springfield, Massachusetts) have developed a wheel for automobiles in which springs are substituted for air for the purpose of rendering the tire resilient. This is the invention of William G. Marr, the president of the company. These wheels are built with a steel band having cylinders projecting radially from the wheel; into these are fitted steel pistons or sliding spokes of great strength. Over the metal band and supporting a sectional outer rim are springs guaranteed to stand any strain to which they may be subjected. The wheel differs little in appearance from the wheel equipped with standard tires. An accompanying illustration gives a general idea of the appearance of the wheel. In this picture the rubber is cut away in one place to show the position of the springs.

* * *

EMPIRE Automobile Tire Co. (Trenton, New Jersey) are making two styles of inner tubes—endless and butt end. The butt end tube is especially convenient for use in the rear wheel of a motorcycle, permitting the changing of tubes without removing the wheel from the frame. This company's tire tubes are furnished in two grades and weights. The Empire grade tubes are of standard thickness and weight. The Empire Peerless tubes are made from red rubber and are thicker and stronger.

* * *

THE Wheeler steel tire armor for motorcycles, pleasure cars and heavy trucks, consists of an inverted spring steel rim, from 20 to 16 gage, provided with a rubber lining and a tread, the latter being made of a number of plies of rubber. Both lining and tread extend beyond the steel rim and tend to render it sandproof and waterproof. Where blowouts oc-

cur safety clamps are provided to retain the armor in place. Both plain and Bailey treads can be obtained for the armor, which can be slipped on the partially deflated tire, and is held securely when the tire is again inflated. Our illustration shows the rim, the rubber lining, and the rubber buttoned tread. The armor can be adapted to either single or double tube tires of any standard make. It is marketed by H. G. Wheeler, Canandaigua, New York.

* * *

THE Rutherford pneumatic wheel has given most satisfactory results recently under severe tests. One was during a tour of a six-ton truck between Stamford, Connecticut, and New York city. The idea of the inventor has been to permit the use of pneumatic tires on heavy commercial vehicles. This device is constructed on the principle of a wheel within a wheel, with a pneumatic tire between them. Two of the principal London companies operating motor buses are referred to as having ordered trial sets of the Rutherford wheel, and it is stated that some of the sight-seeing vehicles in New York are to be similarly equipped. It may be added that the outer tread of the Rutherford wheel is fitted with blocks of wood, metal, or rubber composition, according to the uses to which the vehicle is to be put.

* * *

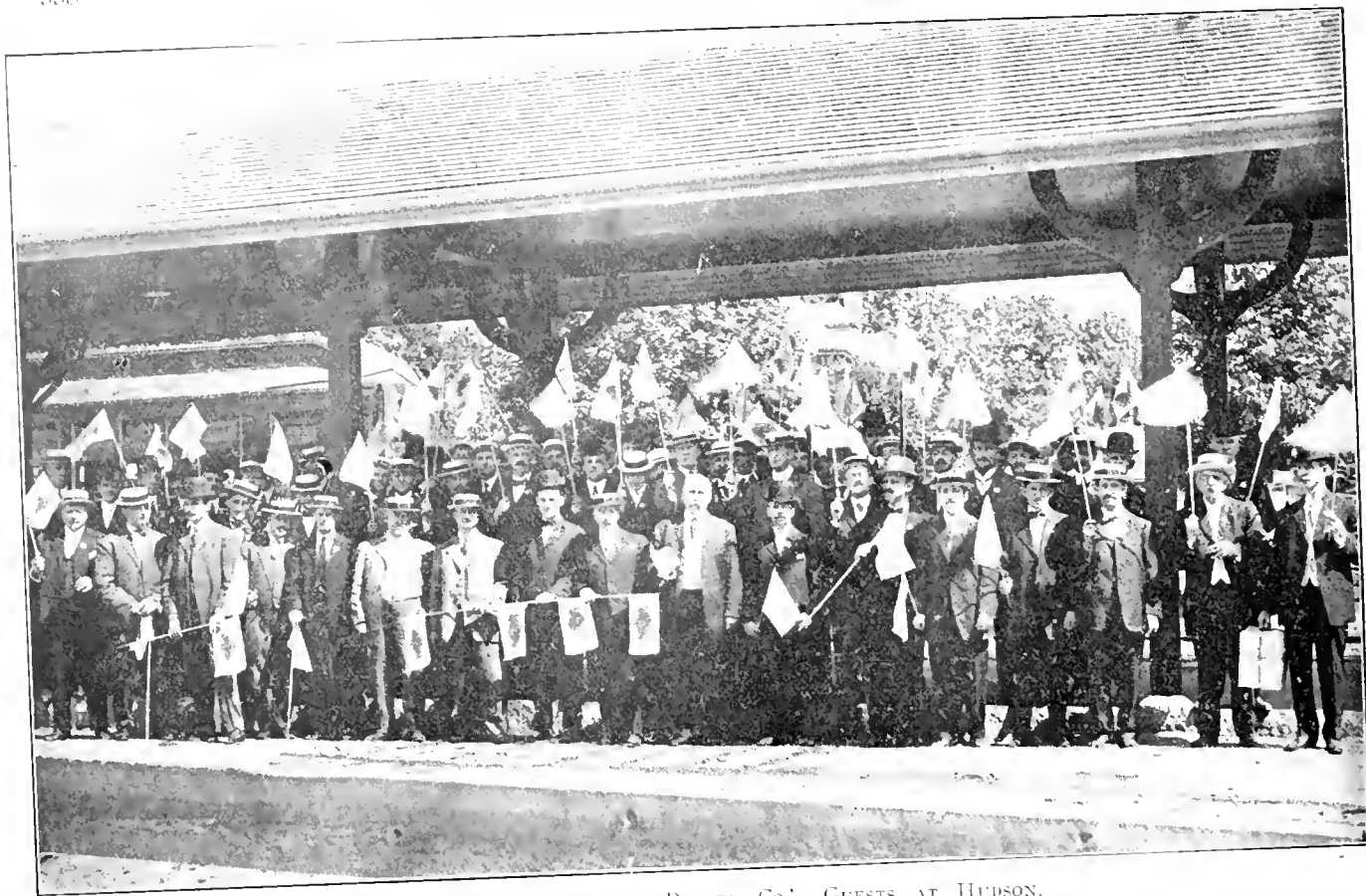
GREAT pains and study have been devoted to the perfection of detachable devices for pneumatic tires, but this has not been the case so much with solid tires for commercial use, though the demand in this field would seem no less important than in the case of automobile tires. The Swinchart Clincher Tire and Rubber Co. (Akron, Ohio) have just brought out a detachable and demountable tire and rim and a rim retainer, patents on which have been applied for. A truck equipped with these devices is not in danger of going out of commission through the loss of a tire, since a new tire already mounted on a rim may be applied in less than 20 minutes. The locking device not only secures the rim laterally, but also wedges it tightly to the retainer, so that there can be no play between the rim and the rim retainer. The endless wire connected with the right hand and left hand threaded turnbuckle can be loosened in less than a half minute.

* * *

THE "Half Nelson" tire has been designed specially for emergency purposes. It is made in several sections—usually six—and the couplings by which the sections are joined into one exactly circular tire consist each of a strong hasp and a double curved hook that cannot come apart except by a peculiar double motion. That is, all the couplings in each tire are of the character described except the last, which is similar to that on gas pipes, except that it is six sided, so as to be easily screwed up with a wrench. Not only is this tire easily and quickly mounted on the wheel, but on account of its being made in sections it can conveniently be stored either in one compartment or in several different places about a car. The tire is marketed by the Half Nelson Emergency Tire Co., Minneapolis, Minnesota.

* * *

F. B. PARKS Co. (Grand Rapids, Michigan), manufacturers of rubber specialties for cycles and automobiles, offer a cement for repair work which is referred to as practically vulcanizing patches in place without heat. It is offered also for repairs on hot water bags, for securing taps and heels on rubber boots, and for splicing rubber belts. The company also make rubber tire repair plugs for bicycles.



ARRIVAL OF THE APSLEY RUBBER CO.'S GUESTS AT HUDSON.

PRESIDENT APSLEY ENTERTAINS.

SATURDAY, the 6th of June, was a gala day for the town of Hudson, Massachusetts, the occasion being the entertainment by the Hon. L. D. Apsley, president of the Apsley Rubber Co., of about 60 guests from New York city, representing two large wholesale houses that handle the Apsley products. The houses referred to were Messrs. Merritt, Elliott & Co., and Chaffin, Thayer & Co., both long established in the boot and shoe trade. Mr. Apsley's invitation was accepted by the heads of these firms and their salesmen, the guests leaving New York in a body on Friday evening on one of the Fall River boats. They were in charge of Messrs. William B. Loughton, treasurer of the Apsley Rubber Co., and Frederick T. Ryder, selling agent. The party had supper on the boat, after which a glee club organized among the salesmen entertained everybody on board with an impromptu concert.

After a night on the boat the party arrived in Boston in time for breakfast and were conveyed thence to Hudson in a special car, being greeted on their arrival by Mr. Apsley. An illustration which appears here shows the party in the railway station, after Mr. Apsley's brief speech of welcome. Each of the guests carried a miniature banner on which appeared the Apsley trade mark.

From the railway station the visitors walked to the factory of the Apsley Rubber Co., where all the processes of manufacturing rubber footwear were in progress and were explained in detail, proving of much

interest to the men whose business is the selling of such goods. Later the members of the party were taken through the town in automobiles and the principal points of interest shown them. Everywhere were decorations in honor of the Apsley guests. Every business house displayed bunting, flags, or signs of welcome; flags were raised on the public buildings and factories, and many residences were decorated. In fact, all Hudson seemed intent upon helping to make the visitors feel welcome.

During the afternoon the New Yorkers were received by Mr. and Mrs. Apsley at their residence, after which they proceeded to Odd Fellows' Hall, the interior of which had been transformed into a banquet room. The decorations covered the walls completely; the window sills were filled with flowering plants; and there was a profusion of flowers on the tables. Back of where the host sat was an evergreen canopy, bearing the word "Welcome" in letters of gold. The ornamental menu card was in the shape of a rubber boot, and included a printed list of the guests. The dinner itself did particular credit to Hudson's caterers. It was served by young men, students at the Hudson high school, who volunteered to assist in the entertainment of Mr. Apsley's guests. The tables were laid for 80 persons, including members of the rubber company's staff.

Mr. Apsley served as toastmaster, and his words of welcome were followed by brief addresses by several of the visitors, all of whom testified to their enjoyment of the occasion, the interest which they had felt



HON. L. D. APSLEY.

in what had been shown them, and their hope that the new business relations into which they had entered with the rubber company would long continue. One of the speeches was made by Mr. J. R. Vail, who presented to Mr. Apsley, in the name of his firm, Merritt, Elliott & Co., a handsome silver loving cup, suitably inscribed, and which the recipient acknowledged in a happy little speech.

The visitors left Hudson at 5:46 p. m., in charge of Treasurer Laighton—with the exception of the heads of the firms, who remained over Sunday at Mr. Apsley's—and went into Boston, where they were assigned to rooms at the United States Hotel. After supper the party went to Keith's Theater. Sunday's program embraced a sight-seeing tour of Boston, a visit to Revere Beach, and return to New York by a night boat.

Whenever Mr. Apsley plans to entertain or celebrate it is on a lavish scale, and the town of Hudson loyally and joyfully takes hold and helps. And this is as it should be, for not only is Mr. Apsley by far its most distinguished citizen, but as the founder of its largest and most profitable industry, and one who takes a keen interest in the welfare of the whole community, he deserves the devotion of his fellow townsmen. Then, too, he really lives there, is not an absentee as so many of big men of our manufacturing towns are, and in his beautiful home is always hospitable, democratic, interested, and when he invites, his charming wife as hostess, with rare tact and genuine hospitality, entertains. And this is why the late visitors at Hudson had such a superlatively pleasant time.

It may be added that the character of the two houses named in this report as having lately become customers of Mr. Apsley's company is such as to make of the new connection a testimonial of the higher order to the products of the factory at Hudson. They are among the oldest firms in the trade, and accustomed always to carrying the lines of the best makers.

The two New York stores represented by Mr. Apsley's guests were closed on the day of the banquet, signs having been posted in advance reading—

THIS STORE WILL BE CLOSED
ALL DAY SATURDAY
TO ENABLE OUR SALESMEN TO
VISIT THE
APSLEY RUBBER FACTORY.
AT HUDSON, MASS.

The Hudson *Enterprise* says in an editorial: "The example set by Hon. L. D. Apsley in giving a practical demonstration to the salesmen of his New York customers, of the making of a shoe, is one that might be followed with profit by manufacturers in many lines of goods. It is a fact known to many observant business men that the average salesman, while being almost invariably an agreeable man to meet, and, perforce, a persuasive talker if he is successful, is also woefully lacking in knowledge of the processes required to produce the finished article whose superiorities he sings.

"- - While life is too short for men to become practical in producing the goods they sell, there are certain points connected with their production which, given as basis upon which to build, equip him as no other instruction could. - - - Certain it is, the New York guests returned home with a better idea of rubber shoes than when they came, and if they hadn't had an enjoyable time it wasn't the Apsley Rubber Co.'s fault."

SOME WANTS OF THE TRADE.

[455] "WHAT can you tell me about a substitute called Terra Alba and who make it?"

[456] "I would like any information which you can give me regarding a substitute by the name of Atmido."

[457] "What do the boot manufacturers in the United States use for dull finishing rubber boots?"

[458] "Where can I get wringer rolls as used in clothes wringers?"

ANOTHER DECISION FOR THE GRANT TIRE.

FOR the second time the Grant tire patent is the subject of a decision by the United States circuit court of appeals for the second circuit. The decision in which it was written by Judge Mr. C. C. Cox, and the purport of which is the same—holding the Grant patent (No. 554,975, issued February 18, 1896) valid and good.

The Diamond Rubber Co. of New York was sued for alleged infringement of the Grant patent on solid tires, by The Consolidated Rubber Co. Co. and The Rubber Tire Wheel Co., the owners of the patent, in the United States circuit court in New York city. A final decree sustaining the patent claims was entered March 2, 1908, from which the defendants appealed. The decision on appeal, in which the decision by circuit court judge is upheld, is dated June 3, 1908. This appellate district, by the way, embraces the states of New York, Vermont, and Connecticut.

Judge Cox says that the appeal in question is in the nature of a reargument of the questions decided in the case wherein the Firestone Tire and Rubber Co. was sued for infringement of the Grant patent. (See THE INDIA RUBBER WORLD September 1, 1906—page 493; March 1, 1907—page 189.) No new evidence was offered. The issues were the same, the issues the same. Judge Cox quotes with approval from the decision of the court below: "That question having once been tried out and a decision made, I do not see what right any other defendant had to go over the same evidence and call upon the court to go over it again, particularly when the decision of the court of appeals is controlling." The decision in the Firestone case on appeal, as already stated, was written by Judge Cox, and he finds nothing in the record of the Diamond Rubber Co. case to warrant any change in his former decision.

Having disposed of the questions involved in the trial, Judge Cox proceeds to remark:

"Another volume of 500 pages has been added to the library which has accumulated during the last ten years through the efforts of many defendants who seem determined to use what they, in effect, assert to be a useless device. The indomitable persistency with which these people have fought for the right to use the Grant tire is more persuasive evidence of its merits than the opinion of experts. If the Willoughby, Latta, and other tires [named in the defenses] are as good as Grant's why do not these defendants use them? The almost frantic efforts which have been made to use the Grant tires are inconsistent with the argument that they show no inventive genius, and we are more and more convinced that we were right when we said that 'no successful rubber tire can be made without embodying the distinguishing features of the Grant patent.'"

It will be remembered that a court of the same rank as that named in the preceding paragraphs has reached a different conclusion, declaring the Grant patent to be invalid. In the decree handed down by Judge Cox, restraining the Diamond Rubber Co. of New York, from any further infringement of the Grant patent and ordering a reference to compute the profits and damages by reason of such infringement, it is stated that nothing therein is intended to enjoin the defendant from handling rubber tires covered by the Grant patent, when manufactured by certain parties having a right to make and sell such tires under a judicial decree in a litigation in federal courts heretofore pending between the present complainant and such parties, wherein it has been judicially determined that said Grant patent is invalid and void. This relates to the case wherein the Goodyear Tire and Rubber Co. were sued by the owners of the Grant patent, and won on appeal.

The Canfield Rubber Co. (Bridgeport, Connecticut) have been adding a number of specialties to their line of products, including some patented packings, and various articles in the line of mold work.

HOW DOW TUBES ARE MADE.

IN the fine fireproof factory buildings situated at the foot of Thirty-sixth street, Brooklyn, New York, is located the Dow Tire Co., manufacturers of the Dow non deflation tube. Almost every motorist knows of the tube—that is an inner tube containing a shallow pocket about three-fourths of the way around and directly over the tread, which pocket is stuffed with a mixture of paste and feathers. From the first the tube was proclaimed a freak, but it still persists in gaining friends and many motorists swear by it. It was because of some excellent reports concerning it that the editor of THE INDIA RUBBER WORLD visited the factory to see how the work was done. The superintendent, Mr. Jacob Abrahams, who has evolved many problems that had to be solved before this special type of tube could be successfully and economically manufactured, showed the various processes with much enthusiasm.

To begin with, the tube is made upon a mandrel, several thicknesses of rubber being lapped upon each other to form the tube proper; then to form the pocket, a portion of the tube is coated with a soapstone paste which is allowed to dry and the wrapping of the sheet of rubber continued until the proper thickness is secured. In order to avoid blisters and the excessive use of the hand roller the mandrel is held by two men, one at each end, with the sheet of rubber hanging free with weights clamped to the lower margin for tension. The next process is wrapping with cloth to hold the rubber in position during vulcanization. This cannot be done by machinery, as the pocket would slip on its soapstone coating. This wrapping is therefore done carefully by hand, four men being necessary to get the cloth on smooth and tight. Vulcanization is, of course, the next process and is accomplished in the usual way.

The removal of the tubes from the mandrel by compressed air is done in the usual way. The clamp for holding the tube throughout its entire length while a jet of air is forced through the pocket is simple and original, as are also the machines for skiving the ends of the tubes preparatory to making the very ingenious double lapped joint that allows of a continuous pocket all the way round. This joint is made over a short collapsible mandrel, just the size of the interior of the tube, which, after the joint is finished, separates into a series of polished wooden rods about the size of carpenters' pencils, which are easily drawn out through the hole left for the valve stem. By the way, before the joint is made a certain amount of paste and feathers is weighed out and forced into the pocket, where it remains in a lump to be afterwards rolled with wooden rolls to distribute it evenly to all parts of the pocket.

This is roughly the method followed in making the Dow tire, and the busy workmen are certainly making a lot of them. It may be a freak but after all may it not be a good one, and is it not possible that the motorists are even now seeing the dawn of that millennial morn when the punctures cease from troubling and the blowouts are no more?

THE EXTRACTION OF GUAYULE RUBBER.

IN a report by the United States consul at Matamoras, Mexico (Mr. Clarence A. Miller), some details are quoted from a Monterey chemist in regard to the extraction of rubber from the guayule plant. He says that two German chemical processes are in use. One of these is based on the application of alkali and the other on the use of benzol and alcohol. However, the system mostly used by the largest factories seems to be the separation of the rubber from the shrub by boiling at a temperature of about 130° C. [—266° F.] three hours, more or less, and adding to the water caustic soda or simply lime; some also add salt to the lime. These substances are used against the resinous contents of the plant, which are extracted together with the rubber. The Monterey man is quoted as claiming another chem-

ical process which he considers best of all, and which has been adopted in a factory at Saltillo after they had invested several hundred thousand dollars in a boiling plant, but no details are given regarding it. The boiling plant is referred to as being more expensive in construction, but cheaper in operation; its disadvantage consists in the loss of 3 to 4 per cent. of rubber as well as "in the quick spoiling of the rubber, which does not last as long as that chemically produced."

The Matamoras consul says: "In addition to guayule, there are in this country other plants containing rubber, but not enough to pay the expense of the extraction of it. Experiments are being made with the candeliala, which is claimed to contain 3 per cent. rubber, considerable resin, and also a high percentage of wax. Some trial carloads of this plant have been exported to Belgium."

OBITUARY.

CASSIUS M. GILBERT, who died at his home in Cleveland, Ohio, on June 8, was a native of Memphis, Michigan. After a short business experience in New York city he engaged in the wholesale paper business at Detroit, going later to Kansas City and becoming interested in real estate. In 1905 Mr. Gilbert became interested in the reclaiming of rubber. In that year he organized the Aladdin Rubber Co., which established a factory at Barberton (near Akron), Ohio, and was doing a good business in making reclaimed rubber when a fire, in June, 1907, caused a heavy loss, making necessary a complete reorganization of the company.

Mr. Gilbert next became associated with Mr. Charles A. Besaw, and they organized The Gilbert-Besaw Co., of Cleveland, to exploit a new reclaiming process which was referred to in the last INDIA RUBBER WORLD. Success attended Mr. Gilbert's enterprises as a rule, and the business in which he was engaged at the time of his death had apparently an exceptionally bright future. This, by the way, will be continued by those who were associated with Mr. Gilbert in planning it. Mr. Gilbert is survived by a widow and one daughter, Mrs. T. E. Dickenson, of Pittsburgh.

* * *

REGINALD WHALLEY WICKHAM, F. R. G. S., of Gloucestershire, England, early in May died on shipboard between Colombo and Singapore, aged about 58 years. Mr. Wickham became interested in planting in Ceylon about 35 years ago. He resided in Ceylon for several years, and at the time of his death was the owner of a rubber estate there, though the last few years he had spent either at his home in England or in travel through the rubber areas of South America. He had established a reputation as an authority on the conditions of rubber production in the Amazon region. Mr. Wickham was a visitor to New York last year, on his return from a trip to South America, incidental to which he came north through Mexico, visiting a number of rubber plantations in the latter country.

* * *

SILAS B. FOOT, head of the firm of Foot, Schultze & Co., large shoe wholesalers of St. Paul, Minnesota, a firm handling rubber footwear in very large volume, died on May 22 in his seventy-fourth year.

THE growth in commercial importance of Manãos is indicated by the establishment there of a branch of the important Bank of Brazil, of Rio de Janeiro, the capital of which is stated at 70,000,000 milreis [= about \$38,220,000]. The Manãos branch was opened in January last and has been proved a success already. Manãos and Pará are on a par as regards their total international trade, but in exports alone Manãos is now in the lead, due to the steady expansion of the rubber trade. The Bank of Brazil, however, is planning a branch for Pará, and another for Santos, the great coffee center.

THE COMING RUBBER EXHIBITION.

[See THE INDIA RUBBER WORLD, June 1, 1908, page 287.]

THE work of organization of the International Rubber and Allied Trades Exhibition, to be held in London September 14-26 next, has made steady progress from the time of its inception, and all indications point to its complete success. In the first place, the expenses were guaranteed by the original group who formed the nucleus of the present management, and it is understood that the returns from the exhibition spaces allotted will exceed the original expectations. In fact, early in the work of preparation it was necessary to look for a more commodious building than the one first selected, and obtain the Olympia, the largest exhibition hall in London. The broad scope of the exhibition and the widespread public interest in rubber which has been developed in recent years, particularly in Great Britain, seem to justify the hope that the attendance will be large.

The enterprise is by no means to be a rubber planting exhibition alone, as was true of the Ceylon Rubber Exhibition of 1906. Such, indeed, was never the thought of the promoters of the Olympia show, but rather to embrace every phase of the rubber interest—crude rubber, manufacturing, and rubber machinery, with all allied subjects. Not unnaturally the rubber planting interest, in view of the success of the Ceylon exhibition, was the first to respond actively to the prospectus of the forthcoming show, but other departments of the rubber trade have gradually given assurances of their support, until now no department is without liberal representation. It was, in fact, the demand for space from the rubber machinery makers that led to the selection of so large a hall as the Olympia.

To-day every country in Europe manufacturing machinery adapted to use either in the rubber goods factory or on rubber plantations is represented in the list of exhibits assured for the Olympia. Likewise leading manufacturers of rubber goods have contracted for space, so that the exhibition is certain to be representative of rubber from every viewpoint. What will be the share of America in this important exhibition remains to be seen, since the correspondence with the various firms on this side of the Atlantic has been conducted from the London headquarters, and a longer time has been necessary for results to be attained than in the case of the European houses.

Visitors to the Rubber Exhibition may be prepared to see rubber plants growing, in every stage from the earliest; sections of mature rubber trees and photographs of entire trees; an exposition of all the methods of tapping rubber trees that have been devised to date, including specimens of tapping devices; demonstrations of the various practices in coagulating rubber; specimens of crude rubber in all known forms, whether "plantation" or "wild"; modern factory practice in the conversion of crude rubber into finished products; and an array of manufactured goods into which rubber enters. The rubber manufacturer will there have an opportunity to study in all its phases the development of the raw materials; the producer of rubber will be able to see what the manufacturer wants in the way of raw materials and by what steps his produce is turned into articles of commercial utility.

THE INDIA RUBBER WORLD has mentioned already the prominence of the president of the International Rubber and Allied Trades Exhibition—Sir Henry Arthur Blake, K. C. M. G., who presided at the Ceylon Rubber Exhibition while governor of Ceylon, prior to which he had been in the service of the British empire as governor successively of the Bahamas, Newfoundland, Jamaica and Hong Kong.

The list of vice presidents embraces a number of gentlemen of note in the development of important interests, including Sir William T. Thiselton-Dyer, K. C. M. G., long director of the Royal Gardens at Kew; Sir Harry H. Johnston, K. C. M. G., the eminent African administrator; the Hon. Mr. John Ferguson, C. M. G., of Ceylon (editor of the *Ceylon Observer*); Professor

Wynndham Dunstan, LL. D., of the Imperial Institute, and H. Kerr Rutherford, Esq., chairman of the Rubber Growers' Association (London), and one of the pioneers in rubber culture in the Far East.

The various active committees embrace such men as Sir Daniel Morris, K. C. M. G., commissioner of agriculture for the British West Indies; Gustave Van den Kerkhove, the Belgian rubber expert; Lieut. Colonel Pram, the present director at Kew; Dr. D. Spence, of the Liverpool University; Dr. Pehr Olsson-Seffer, of Mexico; J. Hancock Nunn, Esq., and Alfred Du Cros, Esq., English rubber manufacturers; Dr. Werner Esch and Dr. Fritz Frank, German rubber chemists; Monsieur A. D. Gillard, of *Le Caoutchouc et la Gutta-Percha* (Paris); and others equally prominent in connection with rubber interests in various countries, every name on the list being an additional testimonial to the earnest and substantial character of the undertaking.

One result of the exhibition may be expected to be a new impetus to the international trade in rubber goods, already so important. It will offer the first opportunity which many of the visitors will have had to see compared the kinds of goods made and used outside of their respective countries. Many such visitors doubtless will be able to acquire new ideas, both for introduction at home and to aid in the wider distribution of their products abroad. Hereafter, even more than in the past, competition in the sale of rubber goods will be between countries as well as between factories in any given country, and such an exhibition as that at the Olympia will prove more educational than the great international general exhibitions of recent years. Our London contemporary, in its June 1 issue, refers to the growing volume of the American rubber trade in terms which might prove surprising to those American firms which have been concerned in the past only with the home trade.

THE INDIA RUBBER WORLD will be represented by an exhibit at the Rubber Exhibition, and its Editor is scheduled for an address on the American rubber industry, illustrated by lanterns, and has been requested to give an illustrated lecture on the rubber plantations he has visited.

The London *India-Rubber Journal* says: "No doubt one of the most interesting lectures delivered at the International Rubber Exhibition to be held at the Olympia will be the one to be given by Mr. Henry C. Pearson, Editor of THE INDIA RUBBER WORLD, New York, entitled, 'Synthetic Rubbers as I Have Seen Them.'"

The committee of the Motor Club (which has one of the largest club houses in London, at the corner of Coventry and Whitecomb streets, near Piccadilly Circus) have most kindly consented to make visitors to London taking part in the Rubber Exhibition honorary members of the club. All that is necessary will be to send name and address on arrival in London to the manager of the exhibition to enable him to notify the secretary of the Motor Club, who will then issue the usual notice.

CEYLON AND THE LONDON EXHIBITION.

At a meeting of the Committee of the Planters' Association of Ceylon (Kandy, March 13), attended by 59 members, it was resolved, in relation to the International Rubber and Allied Trades Exhibition to be held in London:

"That the Ceylon government be informed that this committee is of the opinion that the colony should be strongly represented at this exhibition, and that a sub-committee be appointed to act with the chamber of commerce in arranging details."

The chairman and secretary of the Association, therefore, and five other members were appointed as such sub-committee.

A PLANTATION laborer in the Kalutara district, Ceylon, for stealing rubber worth 50 rupees [= \$16.22], was sentenced to rigorous labor for three years.

AN ENGLISH RUBBER MANUFACTURER.

THE portrait on this page is that of Mr. William Maclean Henderson, who, at the last annual meeting of The India Rubber Manufacturers' Association of Great Britain, was elected chairman, after having filled for several years other positions on the official list. This association, as THE INDIA RUBBER WORLD's readers know, may be said to date its conception from



WILLIAM MACLEAN HENDERSON.

[Chairman India Rubber Manufacturers' Association of Great Britain.]

the circular on advance in prices issued February 10, 1898, following which the advantages of concerted action among the leading manufacturers led to the formation of the association here named, which may now be said to be in its tenth year. From the beginning the membership included the Ancots Vale Rubber Co., Limited (Manchester), of which Mr. Henderson is now managing director. Mr. Henderson, for whose portrait acknowledgment is due to *The India-Rubber Journal*, began his connection with the rubber industry with an important Scotch company in the early seventies. It is now over 30 years since Mr. Henderson left home and took a position as representative for the Ancots Vale company, in which connection he formed many acquaintances in the trade which have since proved of incalculable value in his succeeding business career. After several years Mr. Henderson went over to Messrs. Broadhurst & Co., of Manchester, with whom he likewise had a successful business experience. About 12 years ago he was invited by the directors of the Ancots Vale company, which had then encountered some embarrassment, to assist in putting the business upon a better basis, and the result was the reconstruction of the company in 1898, when Mr. Henderson became managing director. Since this date the company have made steady progress, and important alterations and extensions have been made, and further additions are now in prospect, all testifying to the capacity for business of their active and effective managing director.

WASTE RUBBER IN RUSSIA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of June (page 295) appears, under the heading "Will Old Rubber Shoes Go Higher?" the statement that you estimate the present stock of old rubber shoes in Russia at from 5,000 to 6,000 tons.

As the largest Russian dealer in this line, I would inform you that scarcely 750 to 800 tons old rubber shoes could at the present time be obtained in the entire territory of Russia, inasmuch as the Russian rubber manufacturers are buying up everything in sight in order to prevent an advance in prices, a situation which is presumably not of great importance for the American market. In fact, only small amounts of old rubber shoes can at the present time be exported from Russia to America, because the Russian manufacturers would at once follow suit as soon as the American rubber manufacturers advance the prices they offer. Russian manufacturers can afford to pay high prices, since they

buy old rubber shoes here without having to pay the high export duty of 1.50 rubles per pood. In accordance with the foregoing statements, which are founded on facts, American dealers are right in going slow in the sale of old rubber shoes, and in waiting for higher prices which are sure to come.

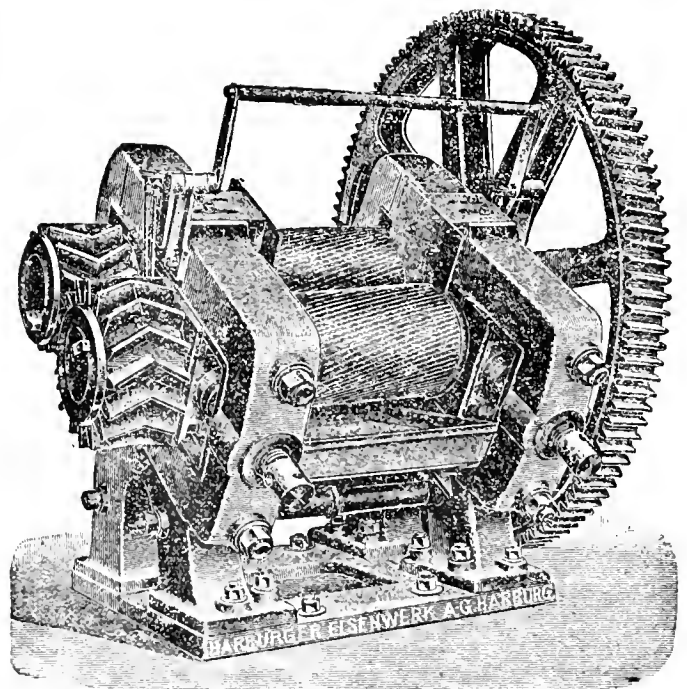
M. J. WOLPERT.

Odessa, Russia, June 12, 1908.

STERILIZING RUBBER GLOVES.

THE gloves are tested for imperfections by blowing them up with considerable force. If the air escapes even in the smallest amount, the glove is discarded. If the nurse is uncertain whether or not there is a puncture, let her hold the inflated glove under water, when if there is a puncture a tiny stream of air bubbles will escape from it. The gloves are washed thoroughly inside and out and then laid in a box with a good supply of talcum powder. The box is shaken briskly, covering the gloves generously with powder. The gloves are turned outside in and powdered again. The gloves may be placed in any steam sterilizer. Hot air should not be turned into the sterilizer. A piece of cotton is laid inside each glove and it is then wrapped loosely in a towel. They should be sterilized alone in the apparatus, being placed as far from the flame as possible, and the steam should flow forty-five minutes. If a high pressure apparatus is used thirty minutes is sufficient. When taken out, the gloves, inclosed in their sterile towels, should be wrapped in sterile paper or laid in a clean box. Before using them the operator washes off the talcum powder with alcohol or antiseptic solution.—*National Hospital Record*.

THE annual report of the Neu Guinea Compagnie, presented at the meeting at Berlin on March 27, shows that during the last business year the rubber plantations were increased by 381 hectares [=941½ acres], bringing the total up to 1120 hectares. There were planted during the year 88,841 young trees—of which 75,548 were *Ficus elastica*, 2534 *Hevea Brasiliensis*, and some others not specified. The total number of rubber trees now under cultivation is 627,104. The company's principal interest to date, however, has been in cocoanuts, to which they have devoted 6660 hectares, part now yielding.



A GERMAN RUBBER WASHER.

[With Oblique Corrugations. Made by Harburger Eisenwerk Actiengesellschaft, at Harburg a d Elbe.]

THE RUBBER TRADE AT SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT

THE condition of the trade has changed very little during the month, and although the merchants would have been pleased to have seen a great increase in business, they must be content with the little improvement which has been shown, and rely on the good indications of better business ahead. Almost all of the rubber houses are experiencing some new activity just now, but most of the manufacturers and jobbers do not now look for the market to get back to normal before next fall. All of the big industries, the mining, lumbering and the lesser industries are being operated in a limited way, owing to the continued difficulty in getting money, and there are more men out of employment than should be the case at this time of the year. This sort of a gingerly way of doing business is not a thing that the local merchants are accustomed to, and even when they are doing a business which could be considered flourishing, under the circumstances, they talk of it as though it were exceedingly quiet. The conditions of crops on the coast is entirely favorable, and the general run of conversation now places the beginning of active times at the commencement of the fall season.

The inactivity of the lumber mills along the northern coast, and the threat of the shipowners to stop running the steam schooners that ply between San Francisco and along the coast is attracting the attention of the rubber merchants of San Francisco. As each mill opens in the mountains it usually puts in an almost entirely new stock of rubber supplies, and the rubber houses here look forward to that trade as a very lucrative one. Whether it is a desire on the part of the lumber men to break the strength of the labor unions, or whether it is merely because money is hard to get to carry on big business undertakings, the fact remains that the mills are not starting up as the rubber houses would like to see them do. The market in lumber is probably in a poorer shape now than for a long time past in San Francisco, although as soon as money gets to moving more freely and the demand increases the market will begin to rise rapidly. Of about 135 steam schooners which come and go here, each carries some 400 feet of hose, and for each trip that they make to San Francisco the local rubber merchants figure on selling them on an average of 50 feet. If the schooners should be called out of service the loss to the rubber business will be considerable.

Moore & Sheehan, who are among the most extensive local dealers in druggists' sundries, and agents for the Davol Rubber Co., report that the demand for sundries has shown a marked increase. E. A. Heinze, with the firm, has just returned from a trip through the Napa and Sonoma valleys, and states that from his observation the business situation is very favorable.

The Goodyear Rubber Co. are at last installed in their new quarters in the new ten-story steel building at Nos. 587-591 Market street, corner of Second. The entrance and portion for samples and offices is the Market street entrance, and the firm also occupies the large store furnished by the building next to the Balboa building, on Second. The Market street store is provided with a balcony which affords additional space, and the fixtures which are now being completed are of the finest.

The merchants who handle rubber in this city have set a good pace to other merchants in the matter of speedily providing themselves with modern stores. Only two years have elapsed since their old locations were all destroyed, and now every one of the prominent rubber establishments is located in quarters which are far ahead of anything which they occupied previous to the big conflagration.

The Diamond Rubber Co. are now well settled in a fine new location at the corner of Second and Mission streets. The offices are subdivided in the front of the store and the fixtures, finished in golden oak, are unusually attractive.

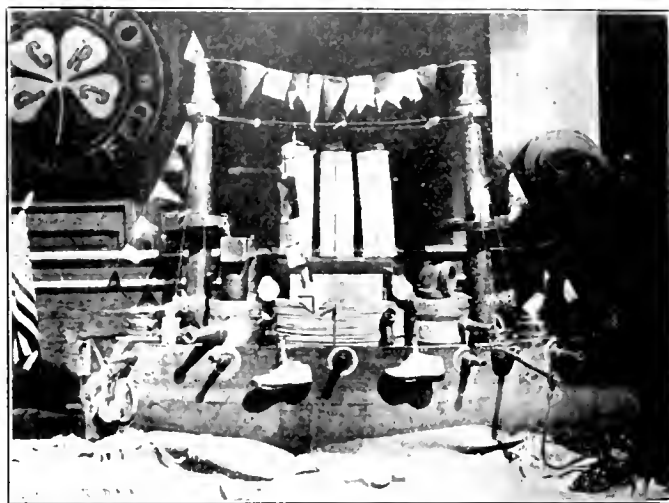
Richardson & Erlin Co., at No. 584 Mission street, representatives of the Davidson Rubber Co., are enjoying an increase in the business of druggists' sundries this month over that of May.

Mr. Norton, president of the Pacific Coast Rubber Co., has recently returned from Portland, Tacoma, and Seattle, and states that he noticed a marked improvement in conditions throughout the northwest. In San Francisco he states that business has picked up quite a bit during the past few weeks, and that although it is not as good as they would like to see it, it is much better than it has been since the first of the year.

The Consolidated Rubber Tire Co., who sell the Kelly-Springfield tires, are now located at No. 507 Howard street.

Mr. Parish, of the Gorham Rubber Co., states that trade conditions still remain quiet, and that the rubber houses are mostly waiting for fall before they expect money to loosen to any great extent. Then the jobbers can get what they want and trade will improve right down the line. A considerable improvement in business is reported from the firm's Seattle branch.

The temporary quarters of the Sterling Rubber Co. have been abandoned for the company's new and permanent building, and they are now actively taking care of the business at the new store.



PACIFIC RUBBER CO.'S "BATTLESHIP."

During the recent visit to the Pacific coast of the American battle fleet part of the scheme of decoration which was universal in the coast cities was the ornamenting of the windows of stores with designs suggested by the occasion. In very many San Francisco store windows the decorations took the shape of battleship displays. For instance, the Pacific Coast Rubber Co., at No. 416 Mission street, displayed a battleship entirely of rubber and kindred articles, which probably was unique. This ship they named the *Ribano*, and it was built as nearly upon the lines of the *California* as possible. A view of this display, reproduced from a photograph, is shown here. The *Ribano* was composed of the following articles:

Hull—Imperial stitched rubber belting; guns—hose mats—underwriters' hose pipes; Tunnels—double jacket fire hose; turrets—Hoyt's belt cement; deck—asbestos gaskets; ventilators—elbows and couplings with reducers; mortars—reducers and spool of wire lace; fighting tops—leather belting; bridge—packing; anchor—washer cutters; port holes—jar rings; boom—Tabor spanner; search light—bucket; wireless telegraph—gag glasses and wire lace; life boats—tennis shoes; launches—rubber shoes; rigging—wire lace and belt plates.

This boat was designed by two ingenious young men in the store, and was much admired by the public. The name given to the boat—*Ribano*—was made up from the names of Messrs. Richter, Basse, and Norton, of the Pacific Rubber Co.

The W. D. Newerf Co., Los Angeles and San Francisco, Pacific coast agents for The Goodyear Tire and Rubber Co.'s tires, donated a beautiful cup as a prize for the winner of the 50-mile Derby at the race meet of the Los Angeles Automobile Dealers' Association, on Decoration day.

The report from the Gutta Percha and Rubber Manufacturing Co., at No. 60 First street, shows that this is the best month the firm have had so far this year, and that trade conditions are showing steady improvement.

Buckingham & Hecht, extensive wholesalers of rubber boots and shoes, have just moved to their new permanent building at the corner of Second and Mission streets, where they now occupy large quarters.

Mr. W. J. Gorham, of the Gorham Rubber Co., has just returned from an automobile trip to Los Angeles, combining business with pleasure. He found the branch store in Los Angeles doing a satisfactory business considering the general depression, and believes that the outlook is bright for southern part of California.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

THE rubber manufacturers of Akron say they are making more automobile tires than ever at the present time. The rush of orders mentioned in recent issues of THE INDIA RUBBER WORLD is keeping up steadily. The slack season, during which the orders for the present year will be falling off and the work for next year has not begun, is expected in August and September. On account of the fact that the Chicago and New York automobile shows have been set from one to three months ahead of the time they were held last year, some have feared that the 1909 tire business will be greatly delayed, but a manufacturer here said that he had no apprehensions on that score. Last year the shows were held early as an experiment, but it was found that the orders for cars came as late as ever. While the manufacturing at this time is mostly to fill consumers' orders, the work in the fall will be for the automobile manufacturers who are beginning to place orders for their 1909 output.

* * *

Most of the automobile tire manufacturers in the United States attended a meeting at Cleveland, Ohio, on May 21, to consider matters of common interest with regard to trade conditions. A committee was appointed to report at a future meeting, which is expected to be held on July 25. Prices of tires have been irregular of late and there are complaints in some quarters of price cutting. Another factor in the situation has been the club proposition, which the tire and accessory makers desire to have regulated before its further spreading. The practice of club members securing inside prices is seriously cutting into the business of the accessory dealers and is generally considered detrimental to the trade, which fears that it may even extend to the buying of cars.

At the same time a meeting of the Clincher Rim Association was held in Cleveland, attended by representatives of companies making and using the principal rims on the market—the Goodrich, the Diamond, the Goodyear, and the Midgley—with the object of devising a plan for standardizing rims. It is stated that progress was made toward realizing this end and other meetings will be called.

* * *

S. S. MILLER, superintendent of the Buckeye Rubber Co., states that the addition to the factory of that company will be in operation in two months. The new building will be used entirely for the manufacture of pneumatic automobile tires. Since the establishment of the factory seven years ago, it has been devoted to the manufacture of the Kelly-Springfield solid carriage tire. During the last year the company have been placing pneumatic tires on the market, with such success as to

lead the construction of the new building for their manufacture on a larger scale. The structure is three stories high, 40 x 231 feet. A new 700 HP. engine, two new boilers, two calenders, two washers, five mills, and a combination press and vulcanizer for automobile tires will be installed. Mr. Miller said that the business of the company in solid tires during the last three months has been the largest it has ever seen.

* * *

As a tribute to the state of Ohio for the privilege of doing business within its borders, the secretary of state received from The B. F. Goodrich Co. alone an annual fee of \$10,000. The fee was paid May 25, under the act of the legislature known as the Willis law. Each year every corporation in the state is required to send to the secretary of state a certificate of its condition and to pay a fee equal to one-tenth of 1 per cent. of the capital stock of the company, which in the case of the Goodrich company is \$10,000,000 and of the Diamond Rubber Co., \$5,000,000. Failure to pay this fee subjects a corporation to the forfeiture of its charter and delay in payment subjects the corporation to a penalty of \$500, and \$100 additional for each day of delay.

* * *

THE Goodyear Tire and Rubber Co. are putting on the market an important automobile accessory in the form of the Goodyear Air Bottle. It is a tank fitted with valve, pressure gage, safety blow off, and valve lifter, filled with sufficient compressed air to inflate eight 3-inch tires to 60 pounds pressure or equivalent. A small hose attached to the bottle is fastened to the opening of the tire valve and the valve on the bottle opened. The pressure gage indicates when the tire is full enough. The bottle enables automobile drivers to save time while en route, in case it is necessary to inflate a tire.

* * *

THE Goodyear Tire and Rubber Co. recently closed a contract with the New York Taxicab Co. to equip the cabs of that company with tires. Instead of selling the tires to the company, the Goodyear people contract to furnish tires by the mile. The tires remain the property of the manufacturers, who are paid so much for each mile each tire travels. Three hundred cabs were equipped for the New York Taxicab Co. and 50 cabs for the New York Transportation Co., the latter contract amounting to about 3,300,000 miles. They are the Goodyear Detachable tires on Goodyear Universal rims. The contract also includes the Goodyear air bottle for inflating tires.

* * *

ORDERS for a new patent tire protector are being filled by the O'Neil Tire and Protector Co., of Akron. The appliance is called the O'Neil Internal Tire Protector. It is made of duck covered with fabric, chemically treated, placed between the tire case and the inner tube, and referred to as cutting down the number of punctures from 70 to 80 per cent. W. J. O'Neil is president, and W. T. Tobin vice-president, and C. J. Maxon, secretary and sales manager of the company. Mr. Maxon said that considerable success had been met with in equipping Glidden cars with the protectors, about 12 drivers in Cleveland and Buffalo having agreed to use the appliance.

* * *

A PRIVATE rubber enterprise called the Eagle Rubber Co., operated by Mr. George N. Eby, is making rubber gloves in the old plant of the Summit Rubber Co., in Barbertown. It is the intention of the company to add other lines of dipped goods.

The Akron Automobile Club has been reorganized, with Fred Work as president, A. B. Smith, vice-president, A. Auble, Jr., secretary, and E. H. Roth treasurer. The club will work for the completion of an improved roadway from Akron to Cleveland.

M. S. Johnson, of The B. F. Goodrich Co., and J. R. Bailey and T. J. Smith, of the Diamond Rubber Co., attended the convention of the Master Car Builders' Association in Atlantic City during the week of June 14.

News of the American Rubber Trade.

GENERAL RUBBER CO.—ELECTION.

THE annual election of the General Rubber Co. (New York, June 4) resulted in the choice of the following as directors: Samuel P. Colt, Lester Leland, William F. Bass, John J. Watson, Jr.; Homer E. Sawyer, Walter S. Ballou, James Deshler, Anthony N. Brady, and Charles H. Dale. Messrs. Bass and Sawyer succeed E. C. Benedict and James B. Ford. The following were elected officers:

President—SAMUEL P. COLT.

Vice President—LESTER LELAND.

Second Vice President (a new office)—WILLIAM F. BASS.

Treasurer—JOHN J. WATSON, JR.

Secretary—SAMUEL NORRIS.

Assistant Treasurer—W. H. BLACKWELL.

Assistant Secretary—JOHN D. CARRERY.

The executive committee consists of the president (*ex-officio*) and Messrs. Dale, Leland, Bass, Watson, and Sawyer. The General Rubber Co. are the purchasing agency of crude rubber for the United States Rubber Co. and the Rubber Goods Manufacturing Co.

ESSEX RUBBER CO. ACQUIRE A FACTORY.

THE Essex Rubber Co. (Trenton, New Jersey) have acquired the plant at May and Beak streets, equipped for factory purposes in 1903 by the late Dyson Rubber Co. The Essex company for some time past have manufactured rubber specialties for the shoe trade, in leased premises, at Bloomfield, N. J., which have now been given up. The new plant acquired will be enlarged to permit of adding the manufacture of rubber mats and tiling. Mr. Oakley has had a long experience in the rubber industry, including several years spent in connection with the Grieb Rubber Co., who made a line of shoe specialties, such as Mr. Oakley is now marketing. Mr. Oakley is president of the Essex Rubber Co.; W. F. Bainbridge is vice-president and New England sales manager, and L. M. Oakley secretary.

HASKELL GOLF BALL CO. VERSUS FIELD.

THE case of the Haskell Golf Ball Co. vs. Marshall Field Co., No. 28,303 in chancery, for alleged infringement of patent, is still pending in the United States circuit court in Chicago. The bill of complaint was filed August 10, 1896, and the complainant was ruled to close its *prima facie* proofs by February 1 last. The defendant has not yet completed its proofs, however, and the case cannot now come on for hearing before autumn. In behalf of the Field company Samuel D. Castle, of Des Moines, Iowa, deposed that he is the original inventor and patentee of the modern method of making golf balls. Castle produced papers taken out in 1880, covering a rubber centered gutta-percha golf ball.

CHANGE OF NAME.

THE name Atlantic Rubber Co. has been adopted for the business at Clarendon Hills, Massachusetts, carried on hitherto as the New England Rubber Manufacturing Co. The business is the manufacture of waterproof clothing.

RUBBER SHOES FOR THE INDIANS.

CONTRACTS for supplying rubber footwear for the Indians, at the expense of the government, for the fiscal year beginning July 1, next, have been awarded to J. Edmund Strong, of Chicago, who for several years past has secured most of this business, and to Siegel Cooper Co. (New York), who get a considerable share of it this year. Details as to the goods called for appeared in THE INDIA RUBBER WORLD of May 1, 1908 (page 271).

HABIRSHAW WIRE CO.'S ANNUAL.

AT the annual meeting of the Harbirshaw Wire Co. (New York, April 15), the following officers were chosen: Herbert L. Satterlee, president, reelected; Richard Irwin (formerly

vice president and treasurer, first vice president, R. S. Satterlee (formerly secretary), second vice president; Fred J. Hall, treasurer; James B. Olson, general sales manager, was also elected secretary. Dr. William M. Habirshaw was re-elected chairman of the board of trustees.

DIXON CRUCIBLE CO.'S ELECTION.

THE annual meeting of the stockholders of the Joseph Dixon Crucible Co. (Jersey City, New Jersey), was held on April 20. Edward F. C. Young, George T. Smith, George E. Long, Harry Dailey, William Murray, Edward L. Long and William H. Corbin were elected members of the board of directors. The officers—Edward F. C. Young, president; George T. Smith, vice president; George E. Long, treasurer; and Harry Dailey, secretary—were unanimously reelected.

WOCNSOCKET RUBBER CO.'S AFFAIRS.

THE report of conditions filed by this company as of March 31, 1908, with the Massachusetts state authorities, with the corresponding figures for two years preceding, is as follows:

ASSETS.			
	1906.	1907.	1908.
Real estate	\$897,543	\$887,218	\$887,218
Machinery	202,842	281,745	281,745
Material	2,429,532	2,918,842	1,971,966
Cash and receivables ..	324,322	152,714	358,860
Adjustment inventory ..	1,198,994	1,198,994	1,198,994
Loans receivable	1,800,000	1,800,000	2,800,000
Miscellaneous	1,178	1,178	1,263
Total	\$6,943,233	\$7,240,691	\$7,500,045
LIABILITIES.			
Capital stock	\$3,000,000	\$3,000,000	\$3,000,000
Accounts payable	185	631,927	26,371
Special debt	1,800,000	1,800,000	2,800,000
Surplus fixed	1,613,900	1,613,900	1,613,900
Profit and loss	529,148	194,864	59,775
Total	\$6,943,233	\$7,240,691	\$7,500,046

BOSTON RUBBER SHOE CO.'S AFFAIRS.

THE report of conditions filed by this company as of March 31, 1908, with the Massachusetts state authorities, with the corresponding figures for two years preceding, is as follows:

ASSETS.			
	1906.	1907.	1908.
Real estate	\$768,525	\$768,525.00	\$768,525.00
Machinery	375,515	375,515.06	375,515.06
Merchandise	3,540,004	4,394,856.51	2,722,804.26
Cash and receivables ..	2,041,383	1,932,444.34	2,220,921.88
Patent rights .....	.....	2,000.00	9,500.00
Special contract U. S. K. Co.	4,800,000	4,800,000.00	4,800,000.00
Miscellaneous	16,620	16,670.00	16,670.00
Total	\$11,542,047	\$12,290,010.91	\$10,913,936.20
LIABILITIES.			
Capital stock	\$5,000,000	\$5,000,000.00	\$5,000,000.00
Accounts payable	428,114	700,146.11	.....
Funded debt	4,800,000	4,800,000.00	4,800,000.00
Floating debt .....	.....	650,000.00	.....
Accrued interest	40,000	40,000.00	40,000.00
Profit and loss	1,273,933	1,093,864.80	1,073,936.20
Total	\$11,542,047	\$12,290,010.91	\$10,913,936.20

LARGE ORDER FOR RUBBER TILING.

WHAT is probably the largest order for rubber tiling ever placed has been received by the New York Belting and Packing Co., Limited, from Andrew Dall & Son, of Cleveland, Ohio. The order is for the company's Interlocking tiling, for the new Cuyahoga county courthouse, at Cleveland. It will be laid in the large court rooms, corridors, judges' chambers, ante rooms,

and so on, in different designs to conform with the color scheme of the various rooms. It is understood the order amounts to about \$125,000.

MR. BOURN STUDYING RUBBER.

MR. AUGUSTUS O. BOURN, Jr., since recently completing a post graduate course at Columbia University, has turned his attention to the business of crude rubber brokerage, opening an office for the purpose at No. 11 William street, New York. Mr. Bourn refers to his new work as a study of the proposition "how to land rubber as economically as possible from the trees to the manufacturer's washing room." The reception given by Mr. Bourn at the university on May 26, on the occasion of the conferring of a degree upon him, was attended by a number of prominent persons, including former Governor Bourn, his father, and Mrs. Bourn; Major General and Mrs. Frederick D. Grant, United States Senator and Mrs. Nelson W. Aldrich, United States Senator and Mrs. George Peabody Wetmore, Bishop and Mrs. David H. Greer, Mr. and Mrs. O. H. P. Belmont, Mr. and Mrs. Franklin Farrel, Mrs. Potter Palmer, Mr. Russell Colt, Mr. Edward B. Aldrich, and Mr. and Mrs. John D. Rockefeller, Jr.

CANADIAN GENERAL ELECTRIC CO.

A GROWING and prosperous business is that of the Canadian General Electric Co., Limited (Toronto), whose works are at Peterboro, 75 miles from the city of Toronto. The company's products embrace practically everything in the way of electrical appliances and supplies, from incandescent lamp bulbs to the largest generators now in commercial use. The works at Peterboro have been expanded annually until they now embrace departments for the production of everything required in the insulation of an electric lighting or power service. Not the least in importance among these departments is the rubber works required for the insulation of wires. Connected with this company in the Canada Foundry Co., Limited, the works of which, at Davenport, form the iron and steel department of the electric company, it being here that the larger machinery, locomotives, and so on are built.

MR. HOTCHKISS GOES AROUND THE WORLD.

THE most recent American visitor to the rubber planting regions of the Far East was Mr. H. Stuart Hotchkiss, vice president and secretary of L. Candee & Co., the rubber footwear manufacturers at New Haven, Connecticut, who has returned from an eight months' trip around the world, on which he was accompanied by Mrs. Hotchkiss. Mr. Hotchkiss visited the Philippine Islands, French Indo China, the Straits Settlements, the Federated Malay States, Java, and Ceylon, studying the conditions of rubber culture closely, after which he had an opportunity to interview in London a number of persons interested in the subject in various ways, and he comes home convinced that the business of planting rubber is already one of great importance and one which is destined to become much more so.

EASTHAMPTON RUBBER THREAD CO.

At the annual meeting of this company (Easthampton, Massachusetts, June 16) the following directors were elected: L. S. Stowe, William G. Bassett, Robert S. Williston, Harry E. Converse, and F. W. Pitcher. William G. Bassett was elected president and L. S. Stowe, long time president of the company, was elected treasurer. F. W. Pitcher was reelected clerk and general manager.

"CAN YOU BEAT THIS?"

AMERICAN TIRE ARMOR Co. (San Francisco) announce that they are "soon to market an automobile tire that will revolutionize the tire business of the world." This will begin when they have sold some of the \$5,000,000 in capital shares authorized by their Arizona charter. Their plan is to sell all the automobile tires required in the United States at an average price of \$50, and an average profit of \$12.50 per tire, all of which works out, according to the company's figures, at an annual dividend of 50 per cent. on the entire capital. As the auto-

mobile production grows, the yearly dividend is expected to go up to 75 per cent. The San Francisco public has been allowed to see the new tire and demonstrations of it in the principal Eastern cities are promised early this month. By the way, the prospectus fails to mention what the company's procedure might be in case any other tire makers should refuse to allow the American Tire Armor Co. to absorb all the trade.

AMERICAN RUBBER CO.'S AFFAIRS.

THE report of condition filed as of March 31, 1908, with the Massachusetts state authorities, embraces the following details:

ASSETS.

Real estate	\$188,008.22
Machinery	136,927.22
Merchandise	1,392,028.97
Cash and receivables	1,189,028.12
Special bills receivable	800,000.00

Total\$3,705,992.53

LIABILITIES.

Capital	\$1,000,000.00
Accounts payable	4,657.39
Special bills payable	800,000.00
Floating debt	300,000.00
Surplus, fixed	865,734.01
Profit and loss	735,601.13

Total\$3,705,992.53

L. CANDEE & CO.'S ANNUAL.

At the annual meeting of shareholders of L. Candee & Co. (New Haven, Connecticut, May 16.) Henry L. Hotchkiss, Samuel P. Colt, James B. Ford, Lester Leland and H. Stuart Hotchkiss were elected directors. On June 18, at a meeting of the directors, Henry L. Hotchkiss was elected president for the thirty-sixth consecutive year; H. Stuart Hotchkiss was reelected vice president and secretary, and W. H. Gilbert was elected treasurer to succeed George E. Bailey.

TRADE NEWS NOTES.

THE Electric Cable Co. (New York), whose plant at Bridgeport, Connecticut, was burned in February last, have nearly completed new works. The new plant is based upon different plans from the old, and the machinery is of more modern design.

The Merchants' Association of New York as usual have secured from the railroads special rates for merchants desiring to visit the city as buyers. These concessions apply to different sections of the country at different dates; for instance, the reduced rates from towns in the Central Passenger Association territory will be in effect for 30 days from July 25. Any person desiring more definite information is invited to write to the association for a circular.

An important rubber manufacturing company got a verdict for 75 cents in a Milwaukee court against a customer in a dispute over payment for fountain pens. The defense had to pay \$4.14 cents costs, also.

Tire-Life Co. (New York) send THE INDIA RUBBER WORLD a section of a motor tire inner tube filled with their compound which is stated to have gone 6,500 miles.

Mr. J. M. Murdock with 6 companions traveled in an automobile from Los Angeles to New York city with no other tire trouble than one puncture, though much of the course was through a rough and sparsely settled country with poor roads. He used "Continental" tires and averaged 136.36 miles per day, over 3,692.8 miles.

The Eton Tale Mining Co. was incorporated June 17 under the New Jersey laws by J. B. Thompson, D. W. Myers, and J. C. Myers, of Atlantic City, N. J., with \$16,000 capital, to mine talc, barytes, and other minerals.

The Diamond Rubber Co. (Akron, Ohio) were mentioned in the last INDIA RUBBER WORLD as having contracted to supply 14,620 pounds of solid rubber tire stock for the New York fire department, to which was added an order for 12,000 pounds on June 10.

A TIRE FILLER IN LITIGATION.

In the superior court at Boston Charles P. Cummings obtained a temporary injunction to restrain William S. Daniels from selling or revealing a secret process for a substitute for rubber, said to be especially valuable as a tire filler. The process is described as the invention of Dr. Joseph P. Bodge, of Portland, Maine, with whom Cummings has contracted for an interest. The party here enjoined evidently is the W. Smalley Daniels lately appointed manager of the Elastic Tire Filling Co., No. 52 Church street, Boston.

UNITED STATES RUBBER CO.'S SHARES.

TRANSACTIONS on the New York Stock Exchange for four weeks ending June 20:

COMMON STOCK.

Week May 29	Sales 2,530 shares	High 25 ⁵ / ₈	Low 24 ¹ / ₈
Week June 6	Sales 2,060 shares	High 26	Low 25
Week June 13	Sales 2,045 shares	High 26	Low 25 ¹ / ₂
Week June 20	Sales 1,025 shares	High 25 ¹ / ₂	Low 25 ¹ / ₂
For the year—High, 26 ¹ / ₈ ; May 19; Low, 17 ¹ / ₈ ; Feb. 26.			
Last year—High, 32 ¹ / ₂ ; Low, 13.			

FIRST PREFERRED STOCK.

Week May 29	Sales 600 shares	High 91 ¹ / ₂	Low 90 ³ / ₄
Week June 6	Sales 1,445 shares	High 93 ¹ / ₂	Low 90 ¹ / ₄
Week June 13	Sales 1,720 shares	High 94	Low 92 ¹ / ₂
Week June 20	Sales 700 shares	High 93 ¹ / ₂	Low 92 ³ / ₄
For the year—High, 95; May 19; Low, 79; Feb. 19.			
Last year—High, 109 ³ / ₄ ; Low, 61 ¹ / ₄ .			

SECOND PREFERRED STOCK.

Week May 29	Sales 700 shares	High 60 ¹ / ₄	Low 58
Week June 6	Sales 1,111 shares	High 61	Low 59
Week June 13	Sales 300 shares	High 60	Low 60
Week June 20	Sales 1,111 shares	High 61	Low 59
For the year—High, 61 ¹ / ₄ ; Jan. 23; Low, 42; Feb. 21.			
Last year—High, 78 ¹ / ₄ ; Low, 30.			

TRADE NEWS NOTES.

THE thirty-seventh regular quarterly dividend of 134 per cent on the preferred shares of the Rubber Goods Manufacturing Co. was payable on June 15. The disbursement amounted to \$181,149.50.

It has been proved many times that a man who is familiar with the rubber manufacture is particularly well equipped to market supplies. This is why the Rubber Trading Co., of New York, have been fortunate in securing Mr. Frank F. Fox as their Trenton representative, as Mr. Fox was formerly connected with several Trenton factories.

Peerless Cement Co. (Lynn, Massachusetts) are manufacturing, in addition to a full line of rubber cements, waterproof box toe gum and other shoe factory supplies. Henry McDermott is the manager, and the offices are at Nos. 218-220 Broad street, Lynn.

John A. Roebing's Sons Co. (Trenton, New Jersey) applied recently for a permit to erect new buildings, at a cost of \$55,000, to replace those destroyed by fire on February 5 last.

The business in crude rubber conducted hitherto by Robinson & Stiles at No. 140 Pearl street, New York, will be continued under the name of Robinson & Co., Mr. W. H. Stiles having retired. The new firm consists of Francis H. Robinson, Francis R. Henderson, and Thomas Desmond.

The Swinehart Clincher Tire and Rubber Co. (Akron, Ohio) have filed with the secretary of state of Illinois the certificate required of foreign corporations to entitle them to do business in that state.

The New Jersey Car Spring and Rubber Co. (Jersey City) announce that their "Tuebor" underwriters' cotton fire hose, which brand is registered in the United States patent office, is approved by the Associated Factory Mutual Fire Insurance Companies and the National Fire Protection Associations.

The Ennis-Ruff Tire Co., now occupying the building No. 22 Commercial street, Newark, New Jersey, are about to add the adjoining factory. Grant Lambright, for many years connected with prominent Akron rubber factories, is the superintendent.

TRADE NEWS NOTES.

THE mills of the Wamsoscket Rubber Co. were not closed this year for "closing day," as has been the custom hitherto. The question of closing was put to the employees, who, in view of the recent long shutdown of the factories, preferred to work on that day.

The Republic Rubber Tire and Shoe Co. of New York point out that much damage has been done to motor car tires by the oiling of roads in the parks and boulevard system in some of the larger cities, and also country roads on Long Island. To avoid damage from such cause the company have brought out a detachable anti skid leather cover, which entirely envelops the rubber tire by hooking in under the rim, and on which there are series of steel studs which prevent the wear of the leather. The idea, of course, is that the oiled thoroughfares will not damage the leather in the tire cover.

The Seamless Rubber Co. (New Haven, Connecticut), owing to the increased business of their Chicago branch, have found it necessary to move into larger quarters and are now located at No. 120 Franklin street.

PERSONAL MENTION.

For two weeks in June Mr. Arthur F. Foansend, president of the Manhattan Rubber Manufacturing Co., who is captain of Troop 1, Squadron A, National Guard of New York state, has been in camp near Middletown, N. Y., at the annual muster of both the regular and volunteer troops.

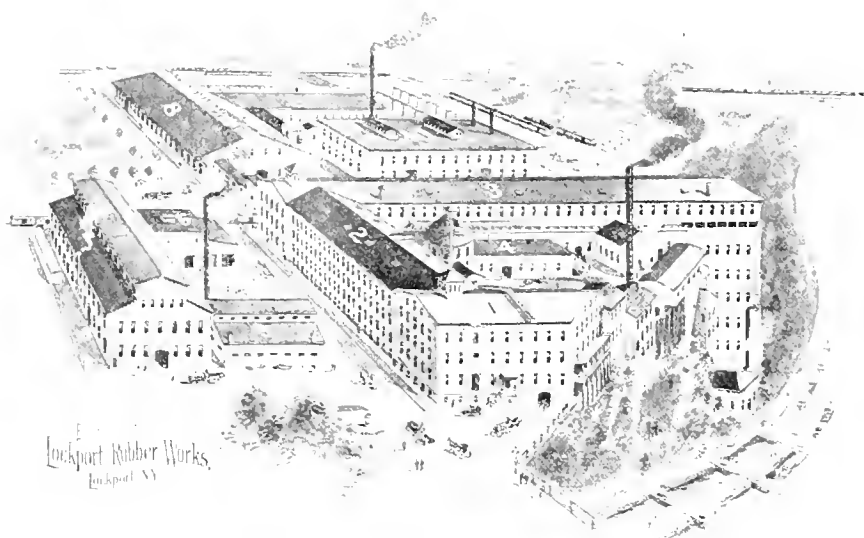
Dr. Erwin Meyer, who for some years has had charge of research work in chemistry for the Rubber Goods Manufacturing Co., at their laboratory at New Brunswick, New Jersey, has resigned that position. It is understood that he has plans, after devoting part of the summer to rest and some writing, for engaging in work as a rubber chemist on his own account.

Major J. Orton Kerbey, some time United States consul at Pará, and connected now with the International Bureau of American Republics, at Washington, sailed from New York on June 22 on the Lloyd Brasileiro steamer *Goyaz* for Pará and other Brazilian ports, intending to reach Rio de Janeiro in time for the Brazilian international exhibition. Afterward he probably will go up the Amazon to the leading rubber districts, including the Acre territory, after which another book from his pen on South America may be forthcoming.

A notable wedding in New Jersey society occurred at New Brunswick on the afternoon of June 3, uniting Miss Margaretta Meyer and Mr. James Kearney Rice, Jr. Miss Meyer is a daughter of Mrs. John Christopher Meyer, whose husband was the oldest son of the one time "rubber king" Christopher Meyer, and who was left in charge of his father's rubber interests. Among the 400 wedding guests were two daughters of the late Christopher Meyer and their husbands—Mr. and Mrs. George Lowther, of Riverside, Connecticut, and Mr. and Mrs. Charles Greer, of Rye, New York. The bride was escorted to the altar by her brother, John Christopher Meyer, and her sister Katherine was maid of honor. Two of the bridesmaids were her cousins, Misses Marguerita and Clara Lowther. Another cousin, Mr. George Greer, was one of the ushers. The bridegroom is connected with the important banking house of Hatch & Co., of New York. The wedding tour is being made in Europe.

Mr. Ira F. Burnham, of Stoughton, Massachusetts, president and general manager of the Stoughton Rubber Co., and Mrs. Gertrude De Laite Paul, of Everett, Mass., were married in the latter city on the evening of May 5.

Mr. E. E. McConnell, after a connection for 11 years with the New York Belting and Packing Co., Limited, as manager of their rubber tiling department, has resigned to accept the position of manager of the rubber tiling department of The Goodyear Tire and Rubber Co. (Akron, Ohio), with headquarters at Sixty-fourth street and Broadway, New York.



VIEW OF THE LOCKPORT RUBBER WORKS.

[The figures on the various buildings indicate: 1—Office and Laboratory. 2—Hose and Tire Departments. 3—Mill Room and Inner Tube Department. 4—Bicycle Tire Department. 5—Machine Shop. 6—Reclaiming Plant. 7, 8, 9—Leased to a textile concern.]

THE RUBBER FACTORY AT LOCKPORT.

AN illustration on this page gives a view of the plant of the Lockport Rubber Works, the establishment of which, at Lockport, New York, has been reported lately in this journal. The company, by the way, have been active during the month in completing the organization of their various departments. It is announced that they will open shortly a New York branch, in charge of Mr. D. B. Nally, who has been widely and well known in the tire trade, from the time when this was confined principally to cycle tires.

TRADE NEWS NOTES.

AN addition has been made to the offices of the Diamond Rubber Co., affording 5,000 square feet of space. The room will be used for factory office departments.

It is expected that the Diamond Rubber Co. employes will have 10,000 people at their annual outing at Myers Lake, Canton, Ohio, this year. The date of the picnic is July 25. Last year the attendance was 8,000 and in the year before 5,000. Picnics of other companies have increased proportionately in attendance, indicating the rapid growth in the number of men employed here in the rubber trade.

Dr. Mary S. Whetstone, a special agent of the bureau of labor of the United States department of commerce and labor, was recently visiting rubber factories in New England to determine the effects of work therein on the health, especially of women and children. She also consulted local physicians relative to conditions of health among rubber workers.

Mr. Eben H. Paine, who has been in Europe since last July in the interest of the United States Rubber Co., returned to the States early in the month and will spend the summer months on this side of the Atlantic. Mr. Paine maintains offices in London, but has traveled extensively on the continent in connection with his company's business.

Frederick T. Ryder, of the Apsley Rubber Co. (Hudson, Massachusetts), has returned from an extensive and successful business trip to the West.

The increase in volume of shipments from Fairfield, Connecticut, is referred to as indicating a marked improvement in business in that locality. The Fairfield Rubber Co. are mentioned as sharing in this improvement.

TRADE NEWS NOTES.

THE Frank Mossberg Co. (Attleboro, Massachusetts) have issued a special catalogue covering metal reels, spools, and beams. This catalogue not only covers reels and spools for the entire wire manufacture; but also for the textile industry. Copies will be sent to any one interested, upon request.

The shareholders of the Apsley Rubber Co. (Hudson, Massachusetts) have voted to increase the capital stock from \$450,000 to \$750,000, leaving the undivided profits at \$270,000 in addition.

The tire output of the factories of the Rubber Goods Manufacturing Co. for this year is reported larger than last, and their railway supplies business is referred to in a newspaper article as aggregating \$3,000,000 to \$4,000,000 a year.

John H. Pierce, superintendent of L. Candee & Co., rubber manufacturers at New Haven, Connecticut, is mentioned as one of the incorporators of Parkham Realty Co., formed to improve real estate at Sheepshead Bay, Brooklyn, New York.

The regular quarterly dividend of the common stock of the Canadian General Electric Co., Limited, at the rate of 7 per cent. per annum, is payable on July 1.

The Boston Die Co. have completed and now occupy a new shop at East Cambridge, Massachusetts. It is equipped with the latest improved machinery and facilities for prompt shipments.

The management of the Chicago Reclaiming Co. have put in plant for the manufacture of mold work and a line of mechanical goods, and have begun manufacturing. This branch of their business is to be conducted under another firm style—Monarch Rubber Works. The location is Forty-sixth avenue and Twelfth street.

Mr. Horace DeLisser, president of the Ajax-Grieb Rubber Co. (Trenton, New Jersey), left early in the month for a business trip in the West, to extend as far as the Pacific coast.

The Durham Rubber Manufacturing Co., Limited (Bowmanville, Ontario), have received an order for a belt which will be 588 feet long and 42 inches wide, and weigh over two tons.

Mr. H. T. Reynolds, until lately connected with The Ohio Rubber Co., at Cincinnati, has accepted a position to represent The Diamond Rubber Co. in Southern territory, in both mechanical and tire lines, with headquarters in Cincinnati.

The Innerseal puncture remedy, for cycle and motor tires, is referred to as a silver flake, and not a liquid that oozes through the punctures, besmearing the tire with a sticky molasses-like substance. It is said not to prevent vulcanizing, and "mends while you ride." It is patented, and made by the Innerseal Manufacturing Co. (Cleveland, Ohio).

Mr. James H. Stearns, of the rubber manufacturing firm of Parker, Stearns & Co. (New York) owns the beautiful Pine Grove Springs Hotel, at Spofford, New Hampshire. It is a fine testimonial to the beauties of the lake and mountain scenery there, as well as to the comforts of the great summer hotel named, that by the first of June, when the house opens, the same families and visitors every year begin to hasten to this delightful resort.

Mr. W. G. Brown has resigned his connection with the Cincinnati Rubber Manufacturing Co., of which he has been vice-president and general manager since the organization of the business, in April, 1905. The resignation dates from June 1.

MR. WILLIAM F. BASS.

THE news that Mr. William F. Bass, general manager of the General Rubber Co. (New York), has been reelected to that office and also made second vice-president will be taken by the trade as an appreciation of very excellent work in that company, with which for some five years past he has been connected. Mr. Bass is by training and experience a thoroughly expert crude rubber man. Beginning with the house of W. R. Grace & Co., he handled all of their Para business right on the docks, thus laying a foundation for a very important part of crude rubber knowledge. Later he connected himself for a time with A. T. Morse & Co., and when the Crude Rubber Co. was formed was



WILLIAM F. BASS.

selected by Mr. Charles R. Flint as one of his right hand men. In the liquidation of that company, Mr. Bass handled all of the accounts with the banks to whom rubber had been pledged. As this meant some 25 or 30 national banks and some 10 or a dozen sterling banks the work was exceedingly difficult, but Mr. Bass handled it with exceptional brilliancy. When that work was finally finished he was secured by the General Rubber Co. as assistant general manager, and was later appointed general manager, and to that office now adds that of second vice-president. Mr. Bass was born in Petersburg, Virginia, and is about 40 years old. He is not only an enthusiastic tennis player, but is manager of the Crescent-La Crosse Club of Brooklyn, which is notable as being the champion team of the United States and Canada.

NEW ENGLAND RUBBER CLUB.

A MEETING of the executive committee of the New England Rubber Club was held on June 23 at the office of President Arthur W. Stedman, in Boston, to perfect arrangements for the mid summer outing.

The mid-summer outing will occur on Wednesday, July 15. In the forenoon of that day those who desire can make entries for golf at the Country Club, Brookline; prizes will be awarded for the best scores. At 1 p. m. the members and their guests will start on a special steamer trip down the harbor and if the weather permits landing will be made at Paddock's Island, Fort Andrews, where the Club will be the guest of United States army officers until 5:30. Weather permitting, a ball game will be played on the island between the Importers and Manufacturers. It is planned to invite the army officers to accompany the Club on the steamer for Point Shirley, where a fish dinner will be served about 6:30 p. m. After a social evening at Point Shirley the steamer will be taken to Boston, arriving about 10 p. m.

At the same meeting it was voted that the president of the Club write to Governor Guild, of Massachusetts, suggesting that he use his influence toward having the governors of all the New England states meet to confer on such matters of common interest to New England as forestry, agriculture, and improvement of transportation. It is understood that a movement is on foot in all the business clubs in New England in behalf of such a conference.

Mr. Henry C. Pearson, vice president, has been appointed a delegate to represent the Club at the International Rubber and Allied Trades Exhibition to be held in London in September.

At a meeting of the executive committee of the New England Rubber Club, held on Tuesday, June 2, the following committees were appointed:

Dinner.—Francis H. Appleton, chairman; John Patterson, W. E. Barker, E. H. Clapp, T. J. Skinner.

Sports.—W. E. Farrington, chairman; Henry G. Tyer, F. D. Balderston, F. C. Hood, R. L. Chipman.

Entertainment.—George H. Mayo, chairman; Roy L. Dorr, C. J. Bailey, James H. Learned, William H. Palmer.

Resolutions.—George P. Whitmore, chairman; E. E. Wadbrook, A. M. Paul.

Auditing.—J. Frank Dunbar, chairman; George P. Eustis.

NEW INCORPORATIONS.

THE Courtney Rubber Co., June 15, 1908, under the laws of New York state; capital, \$100,000. Incorporators: W. J. Courtney and T. M. Johnson, No. 15 Wall street, and John G. Phiel, No. 52 Broadway, New York. The company will manufacture automobile tires and tubes; also mechanical rubber goods, more particularly for railway use. The plant of the new company, at Plainfield, New Jersey, is the first rubber works in that town. Mr. Courtney has been connected for a number of years with one of the leading mechanical rubber goods companies. The office, for the present, is at No. 15 Wall street.

Peerless Leather Tire Co., May 2, 1908, under the laws of California; capital, \$20,000. Incorporators: S. Folmer Swain, Cecil H. Stone, H. R. Newbauer, Marcus Weinberger, and Edward W. Gunther, all of San Francisco.

Malaysian Rubber Co., June 18, 1908, under the New Jersey state laws; capital authorized, \$3,000,000. Incorporators: William Mason Smith, Armin W. Riley, and Clarence E. Sterreth, all of No. 15 Exchange place, Jersey City, N. J.

PERSONAL MENTION.

MR. FREDERICK NATHAN HAMERSTROM, general manager of The Trenton Rubber Manufacturing Co., and Miss Helen Harper Davis, daughter of Mr. and Mrs. Frederick A. Davis, of Germantown, Pennsylvania, were married at the home of the bride on June 16. After September 1, Mr. and Mrs. Hamerstrom will be at home at No. 850 Carteret avenue, Trenton.

The marriage is reported of Mr. Richard Croker, Jr., of New York, and Miss Mary Brophy, of Providence, Rhode Island. Mr. Croker, at the organization of the International Automobile and Vehicle Tire Co., was elected vice president and manager. Later he joined a banking firm in New York, and he is now secretary of the Roebbling Construction Co., a subsidiary concern of John A. Roebbling's Sons & Co. The bride is referred to as a niece of the late Joseph Baniagan, the rubber manufacturer, and heiress to a portion of his estate.

Mr. George S. Andrus, manager of the Apsley Rubber Co. (Hudson, Massachusetts), stopped work long enough in the middle of June to go to the Clinton Hospital, at Clinton, Mass., and get rid of a somewhat troublesome appendix. The operation was in every way successful and he made a very rapid recovery.

Mr. H. O. Canfield (Bridgeport, Connecticut), of the rubber company that bears his name, has been quite ill of ptomaine poisoning, but his many friends will be glad to know he is up and out and fully recovered.

Review of the Crude Rubber Market.

AFTER a month of fluctuations and, during part of the time, of dullness, prices of crude rubber to-day show, on the whole, something of an advance over the quotations printed in our last issue. A number of items are not changed, and a few are lower, according to the supplies of the different grades in the market. Islands fine new shows a decline, while Upriver fine new is higher, due to the relative volume of arrivals. Toward the end of the month an improved demand for rubber developed, indicating either that manufacturers' stocks are becoming depleted or that a larger volume of business in the industry is in sight.

Arrivals of rubber (including cancho at Pará) continue on a liberal scale—larger, in fact, than in any former period, except for the crop season ended June 30, 1907, for which the figures were unprecedentedly large. In the table below will be seen the extent of the arrivals at Pará for the past ten crop years, except that the figures for June, 1908, are not quite complete:

	Tons.		Tons.
1898-99.....	25,370	1903-04.....	30,580
1899-1900.....	26,670	1904-05.....	33,060
1900-01.....	27,610	1905-06.....	34,490
1901-02.....	30,000	1906-07.....	38,005
1902-03.....	29,850	1907-08.....	336,670
[a—To June 20, 1908.]			

Almost without exception each season has shown a larger crop than in the preceding year, regardless of price conditions. It may be suggested here that, whereas the lower prices for rubber ruling for some months past may ultimately have the effect of decreasing the output of rubber from the Amazon region, such effect has not yet been visible, for the reason that most of the rubber exported during the past twelve months has been credited against advances of goods or funds made before the decline. The last year has shown a smaller output than 1906-07, it is true, but such variations are not unusual; besides, the figure for the former year was abnormal. It may be added that at Manãos the arrivals this year have been larger than in any other, the figures standing:

	Tons.
Eleven months ending May 31, 1906.....	22,475
Eleven months ending May 31, 1907.....	25,034
Eleven months ending May 31, 1908.....	26,607

The smaller total receipts at Pará have been due to a falling off at other points than at Manãos, the details of, or the reasons for, which are not yet to hand.

At the monthly inscription sale at Antwerp, on June 25, the offerings were exceptionally large, aggregating 676 tons, mostly of Congo sorts, and of which more than 500 tons found buyers. The sale went off at an advance over the prices realized at the May inscription, and these, it will be remembered, showed a substantial gain over the brokers' estimations. At the June sale, it is reported, priced showed an advance of about 30 centimes per kilogram [=22/3 cents per pound]. Further Antwerp rubber statistics appear on page 354 of this paper.

Following are the quotations of New York for Pará grades one year ago, one month ago, and June 30, the current date:

PARÁ.	July 1, '07.	June 1, '08.	June 30.
Islands, fine, new.....	104 @ 105	89 @ 90	87 @ 88
Islands, fine, old.....	none here	none here	none here
Upriver, fine, new.....	110 @ 111	92 @ 93	93 @ 94
Upriver, fine, old.....	112 @ 113	94 @ 95	95 @ 96
Islands, coarse, new.....	61 @ 62	46 @ 47	44 @ 45
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	87 @ 88	64 @ 65	64 @ 65
Upriver, coarse, old.....	none here	none here	none here
Cancho (Peruvian), sheet.	70 @ 71	49 @ 50	50 @ 51
Cancho (Peruvian), ball..	82 @ 83	61 @ 62	62 @ 63
Cancho (plantation), fine			
Cancho (plantation), ball..	127 @ 128	102 @ 103	103 @ 104

AFRICAN.

Sierra Leone, 1st quality.....	76 @ 77	Lopori ball, prime.....	80 @ 81
Massai, red.....	76 @ 77	Lopori strip, prime.....	62 @ 63
Benguella.....	48 @ 49	Madagascar, pinky.....	68 @ 69
Acera flake.....	15 @ 16	Ikelemba.....	none here
Cameroon ball.....	47 @ 48	Soudan niggers.....	54 @ 55

CENTRALS.

Esmeralda, sausage.....	62 @ 63	Mexican, scrap.....	61 @ 62
Guayaquil, strip.....	46 @ 47	Mexican, slap.....	44 @ 45
Nicaragua, scrap.....	50 @ 60	Mangabeira, sheet.....	46 @ 47
Panama.....	44 @ 45	Guayule.....	26 @ 27

EAST INDIAN.

Assam.....	78 @ 79	Borneo.....	26 @ 27
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Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	4 \$100	Upriver, fine.....	4 \$900
Islands, coarse.....	1 \$725	Upriver, coarse.....	3 \$150
		Exchange.....	15 7/32d.

Latest Manãos advices:

Upriver, fine.....	5 \$250	Exchange.....	15 5/32d.
Upriver, coarse.....	3 \$250		

Statistics of Para Rubber (Excluding Cacho).

NEW YORK.

	Fine and Medium.	Coarse.	1908.	Total 1907.	Total 1906.
Stocks, April 30.....	280 tons	77 =	375	277	386
Arrivals, May.....	1031	475 =	1506	1175	1194
Aggregating.....	1311	552 =	1863	1452	1580
Deliveries, May.....	1002	491 =	1493	1083	1293
Stocks, May 31.....	309	61 =	370	369	287

PARÁ.

	1908.	1907.	1906.	1908.	1907.	1906.
Stocks, April 30.....	1040 tons	510	267	2005	950	1280
Arrivals, May.....	1955	1765	1420	700	910	555
Aggregating.....	2095	2275	1687	2705	1860	1835
Deliveries, May.....	2360	1670	1597	1110	800	775

ENGLAND.

	1908.	1907.	1906.
Stocks, May 31.....	635	605	90
World's visible supply, May 31.....	3,469 tons	3,091	2,078
Pará receipts, July 1 to May 31.....	28,420	30,460	27,584
Pará receipts of Cacho, same dates.....	6,370	5,960	5,245
Afloat from Pará to United States, April 30	750	498	740
Afloat from Pará to Europe, May 31.....	424	835	451

Plantation Rubber in London.

JUNE 12.—Lewis & Peat report: "About 1,219 packages, weighing about 64 tons, the largest weight yet catalogued, were offered at auction to-day, the greater proportion of which sold at and after the sale." Gow, Gow, Wilson & Staunton, Limited, report: "There was a fairly good demand. The finer qualities especially attracting attention and being well competed for. Some very fine pole Warriapolla estate biscuits realized the highest price of the day—4s. 6d. [= \$—] per pound. Rangbodde 'Cerá' biscuits came next at 4s. 5d., while the two finest lots of crepe in the sale, from Ellakande and Nikakotna estates, sold at 4s. 2½d." Fine plantation sold one year ago up to 5s. 8d. [= \$—]. Hard, fine Pará to-day, 3s. 0d.; last year, same date, 4s. 7d.

Liverpool.

EDMUND SCHLUTER & Co. report [May 31]:

The advance in prices has been more rapid than was anticipated, owing to an earlier demand from America than was expected, and although this demand seems satisfied for the time being, the possibility of further purchases together with the confirmation of the lateness of the new crop keeps the market steady.

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it **does not blow under cure.**

WRITE FOR PRICES.

Massachusetts Chemical Co.

WALPOLE, MASS.

Operates Walpole Rubber Works; Walpole Varnish Works.

THE WORLD'S VISIBLE SUPPLY OF PARA, MAY 31

Tons	1908.	1907.	1906.	1905.	1904.	1903.
.....	0478	4452	3393	2908	2036	3656
Prices, hard fine	3/6 1/2	4/7 1/2	5/3 1/4	5/8 1/2	4/10	3/10 1/4

LIVERPOOL STOCKS OF AFRICAN RUBBER, MAY 31.

1908.....	435	1905.....	300	1902.....	599
1907.....	330	1904.....	567	1901.....	852
1906.....	367	1903.....	330	1900.....	834

WILLIAM WRIGHT & Co. report [June 1]:

Fine Para.—Under the influence of American orders, the market has been active on spot and for delivery, and a large business done at advancing prices; closing value, upriver 3s. 10d., an advance of 4d. per pound during the month. European manufacturers are, however, not buying freely, anticipating a setback in prices later on. The fact, however, of America buying here has undoubtedly stiffened holders' views, as it proves that the surplus stock is held in Europe, and that America will have to supply her requirements to a large extent from this country. Should the American demand continue, it may force European manufacturers to enter the market, which would still further advance prices.

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

MAY 25.—By the steamer *Basil*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
New York Commercial Co.	235,509	62,000	90,300	129,700	518,400
A. T. Morse & Co.	146,400	12,200	85,000	47,000	291,200

PARA RUBBER VIA EUROPE.

MAY 28.—By the <i>Lincoln</i> =Hamburg:	
New York Commercial Co. (Fine)	16,500
New York Commercial Co. (Coarse)	12,000
JUNE 1.—By the <i>Campania</i> =Liverpool:	
New York Commercial Co. (Fine)	135,000
Poel & Arnold (Fine)	80,000
General Rubber Co. (Fine)	22,500
New York Commercial Co. (Caucho)	53,000
JUNE 2.—By the <i>Mauretania</i> =Liverpool:	
New York Commercial Co. (Fine)	22,500
JUNE 3.—By the <i>President Grant</i> =Hamburg:	
New York Commercial Co. (Coarse)	30,000
Poel & Arnold (Coarse)	20,000

JUNE 8. By the <i>Caronia</i> =Liverpool:	
New York Commercial Co. (Fine)	28,000
General Rubber Co. (Fine)	112,000
New York Commercial Co. (Coarse)	10,000
JUNE 8.—By the <i>Blucher</i> =Hamburg:	
New York Commercial Co. (Fine)	33,500
JUNE 11.—By the <i>Umbria</i> =Liverpool:	
New York Commercial Co. (Fine)	15,500
JUNE 11.—By the <i>Pennsylvania</i> =Hamburg:	
Poel & Arnold (Fine)	61,000
New York Commercial Co. (Coarse)	7,000
JUNE 13.—By the <i>Victoria</i> =Hamburg:	
New York Commercial Co. (Fine)	11,500
W. L. Gough Co. (Fine)	2,000
JUNE 17.—By the <i>Esperanza</i> =Mollendo:	
W. R. Grace & Co. (Caucho)	20,000

JUNE 18. By the <i>Carmania</i> =Liverpool:	
General Rubber Co. (Fine)	156,000
A. T. Morse & Co. (Coarse)	11,000
JUNE 18.—By the <i>Patricia</i> =Hamburg:	
New York Commercial Co. (Fine)	10,000
JUNE 19.—By the <i>Mauretania</i> =Liverpool:	
General Rubber Co. (Fine)	115,000
A. T. Morse & Co. (Coarse)	15,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

MAY 23.—By the <i>Morro Castle</i> =Frontera:	
Harburger & Stack	2,500
H. Marquardt & Co.	2,000
E. Steiger & Co.	2,000
G. Amsinck & Co.	2,500
Manhattan Rubber Mfg. Co.	1,500

PARA EXPORTS OF INDIA-RUBBER, APRIL, 1908 (IN KILOGRAMS).

NEW YORK.						EUROPE.					
EXPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.	TOTAL.
Schrader, Gruen & Co.....	44,894	6,376	28,207	35,854	115,331	31,060	4,393	7,207	4,000	46,731	162,062
Adelbert H. Alden.....	124,230	31,708	59,323	200,429	415,699	2,210	1,100	5,940	13,280	22,620	438,338
Gordon & Co.....	75,460	19,578	103,179	424	198,650	59,528	10,616	8,033	20,192	90,289	297,039
Scholz, Hartje & Co.....	96,156	22,451	64,093	14,700	197,310	12,920	4,500	25,000	45,837	80,247	286,537
E. Pinto Alves & Co.....	40,444	1,926	49,585	401	92,356	56,270	340	60,000	....	126,570	218,926
J. Marques & Co.....	15,530	1,060	44,436	12,925	73,651	10,540	1,100	10,560	18,480	40,770	114,421
De Lagotellerie & Co.....	6,200	510	34,073	1,680	42,553	10,673	3,110	4,224	1,104	19,111	61,664
Pires, Teixeira & Co.....	8,160	....	15,510	....	23,670	12,070	....	17,400	....	29,560	53,230
R. Suarez & Co.....	....	....	3,448	....	3,448	24,247	....	9,584	14,753	48,584	52,032
R. O. Ahlers & Co.....	9,526	....	2,457	....	11,983	23,225	....	5,557	1,492	30,244	42,227
Mello & Co.....	....	....	....	....	....	17,130	3,710	7,150	....	27,990	27,990
Singlehurst, Brocklehurst & Co....	....	....	....	....	....	9,459	....	2,104	48	11,611	11,611
Sundries	....	....	....	....	....	100	....	....	....	100	100
Itacoatiara direct	....	....	....	....	....	1,779	....	2,014	556	4,349	4,349
Manãos direct	310,502	60,704	122,079	279,296	781,581	266,821	50,204	101,668	308,526	817,309	1,508,808
Iquitos direct	....	....	....	....	....	17,490	899	17,310	139,564	175,263	175,263
Total, May.....	731,210	153,313	526,300	545,400	1,956,232	555,522	80,354	205,601	657,880	1,589,357	3,545,589
Total, April.....	313,696	91,140	347,747	280,426	1,042,018	924,056	131,068	277,366	681,718	2,016,008	3,958,266
Total, March.....	682,575	172,165	447,252	117,301	1,410,293	1,400,736	232,270	330,802	830,652	2,803,460	4,222,762
Total, February.....	1,040,175	230,591	493,147	164,208	1,937,121	1,832,458	235,386	524,020	901,530	3,583,403	5,520,524
Total, January.....	851,402	160,204	450,219	160,837	1,622,662	1,341,043	211,000	378,000	616,237	2,547,240	4,169,902

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

MAY 25.—By the <i>El Sud</i> =Galveston: Continental-Mexican Rubber Co.....	*110,000
MAY 25.—By the <i>Vigilancia</i> =Tampico: Edward Maurer.....	220,000
National Rubber Co.....	55,000
H. Marquardt & Co.....	9,000
General Export & Commercial Co.....	3,500
MAY 27.—By the <i>Siberia</i> =Greytown: G. Amsinck & Co.....	3,500
Kunhardt & Co.....	2,500
MAY 27.—By the <i>Guthrie</i> =Bahia: Poel & Arnold.....	11,000
New York Commercial Co.....	9,900
MAY 27.—By the <i>El Mar</i> =Galveston: Continental Mexican Rubber Co.....	*28,000
Edward Maurer.....	22,000
MAY 28.—By the <i>Antilles</i> =New Orleans: A. N. Rotholz.....	3,000
Eggers & Heinlein.....	500
MAY 28.—By the <i>Saxon Prince</i> =Bahia: Poel & Arnold.....	22,500
A. D. Hitch & Co.....	9,500
J. H. Rossbach & Bros.....	4,500
MAY 29.—By <i>El Alba</i> =Galveston: Continental-Mexican Rubber Co.....	*27,500
MAY 29.—By the <i>Advance</i> =Colon: G. Amsinck & Co.....	15,500
Hirzel, Feltman & Co.....	13,500
Aramburo, Inc.....	3,500
Meyer Hecht.....	1,500
J. A. Pauli & Co.....	500
Andreas & Co.....	500
JUNE 1.—By the <i>Campana</i> =Liverpool: Poel & Arnold.....	11,500
George A. Alden & Co.....	2,500
JUNE 1.—By the <i>Mexico</i> =Vera Cruz: H. Marquardt & Co.....	2,500
Graham Hinkley Co.....	1,000
Scholz & Marterat.....	500
JUNE 1.—By the <i>Proteus</i> =New Orleans: A. N. Rotholz.....	2,500
A. T. Morse & Co.....	1,000
JUNE 1.—By the <i>Cienfuegos</i> =Tampico: Poel & Arnold.....	*15,000
Harburger & Stack.....	3,500
JUNE 2.—By the <i>Panama</i> =Colon: Isaac Brandon & Bros.....	8,000
Roldau & Van Sickle.....	5,000
G. Amsinck & Co.....	2,000
Demarest Bros. Co.....	1,500
Wessels & Kuilekamp.....	500
Sperling & Williams.....	500
Aramburo, Inc.....	500
JUNE 3.—By <i>El Paso</i> =Galveston: Continental-Mexican Rubber Co.....	*27,500
JUNE 3.—By the <i>President Grant</i> =Hamburg: George A. Alden & Co.....	7,000
JUNE 5.—By the <i>Prins Euthel</i> =Savannah: G. Amsinck & Co.....	2,500
JUNE 5.—By the <i>El Rio</i> =Galveston: Continental-Mexican Rubber Co.....	*87,500
JUNE 5.—By the <i>Voltare</i> =Bahia: New York Commercial Co.....	34,000
J. H. Rossbach & Bros.....	9,000
A. D. Hitch & Co.....	6,500
A. Hirsch & Co.....	3,500
JUNE 6.—By the <i>Monterey</i> =Frontera: Harburger & Stack.....	15,000
E. Steiger & Co.....	7,000
JUNE 8.—By the <i>Alliance</i> =Colon: Isaac Brandon & Bros.....	5,000
Hirzel, Feltmann & Co.....	5,000
Fidanque Bros.....	1,000
Henry Maurer & Co.....	1,000
JUNE 9.—By <i>El Cid</i> =Galveston: Continental-Mexican Rubber Co.....	*27,500
JUNE 11.—By the <i>Creole</i> =New Orleans: A. T. Morse & Co.....	8,500
L. Stein & Co.....	1,000
Eggers & Heinlein.....	1,000
JUNE 12.—By the <i>Magdalena</i> =Columbia: G. Amsinck & Co.....	2,500
Roldau & Van Sickle.....	2,500
Isaac Brandon & Bros.....	2,500
H. W. Peabody & Co.....	1,000
JUNE 12.—By the <i>Yumuri</i> =Tampico: Edward Maurer.....	150,000
T. A. Kendall & Co.....	30,000
H. Marquardt & Co.....	3,500
General Export & Commercial Co.....	2,500
JUNE 13.—By the <i>Finance</i> =Colon: G. Amsinck & Co.....	3,500
Isaac Brandon & Bros.....	2,000
A. Rosenthal Sons.....	1,500
Roldau & Van Sickle.....	1,000
Bartling & De Leon.....	1,000
JUNE 15.—By <i>El Valle</i> =Galveston: Continental-Mexican Rubber Co.....	*27,500
JUNE 15.—By the <i>Merida</i> =Frontera: Harburger & Stack.....	5,500
American Trading Co.....	5,500
E. Steiger & Co.....	2,500

E. G. Phister.....	2,000
Graham Hinkley & Co.....	2,000
H. Marquardt & Co.....	1,000
JUNE 17.—By <i>El Alba</i> =Galveston: Continental-Mexican Rubber Co.....	*125,000
JUNE 17.—By the <i>Esperanza</i> =Colon: G. Amsinck & Co.....	13,500
Isaac Brandon & Bros.....	9,500
Hirzel, Feltmann & Co.....	4,500
Demarest Bros. & Co.....	3,000
R. G. Barthold.....	2,000
Suzarte & Whitney.....	1,500
Andreas & Co.....	1,500
J. & J. Lansdale.....	1,000
JUNE 19.—By the <i>Grecian Prince</i> =Bahia: Poel & Arnold.....	42,000
J. H. Rossbach & Bros.....	25,000
A. Hirsch & Co.....	7,000
JUNE 19.—By <i>El Norte</i> =Galveston: Continental-Mexican Rubber Co.....	*55,000
JUNE 20.—By the <i>Merro Castle</i> =Vera Cruz: H. Marquardt & Co.....	5,000
American Trading Co.....	2,000
JUNE 22.—By the <i>Byron</i> =Bahia: A. Hirsch & Co.....	18,000
J. H. Rossbach & Bros.....	5,500
JUNE 22.—By the <i>Vigilancia</i> =Tampico: Edward Maurer.....	56,000
Poel & Arnold.....	22,500
In transit.....	35,000
*This sign, in connection with imports of Gen- erals, denotes Guayule rubber.	
AFRICANS.	
MAY 25.—By the <i>Arabic</i> =Liverpool: Poel & Arnold.....	120,000
MAY 25.—By the <i>Saraje</i> =Havre: George A. Alden & Co.....	7,000
MAY 27.—By the <i>Kronland</i> =Antwerp: A. T. Morse & Co.....	50,000
Poel & Arnold.....	11,000
Henry A. Gould Co.....	2,500
JUNE 27.—By the <i>Lusitane</i> =Bordeaux: General Rubber Co.....	13,500
JUNE 28.—By the <i>Lincoln</i> =Hamburg: George A. Alden & Co.....	13,000
A. T. Morse & Co.....	22,500
JUNE 1.—By the <i>Campana</i> =Liverpool: George A. Alden & Co.....	25,000
Poel & Arnold.....	25,000
JUNE 1.—By the <i>Pennsilar</i> =Lisbon: General Rubber Co.....	45,000
Poel & Arnold.....	45,000
George A. Alden & Co.....	22,500
JUNE 1.—By the <i>Amerika</i> =Hamburg: Poel & Arnold.....	11,500
General Rubber Co.....	8,000
JUNE 2.—By the <i>Finland</i> =Antwerp: A. T. Morse & Co.....	20,000
Raw Products Co.....	5,000
JUNE 3.—By the <i>President Grant</i> =Hamburg: George A. Alden & Co.....	7,000
W. L. Gough Co.....	5,500
A. T. Morse & Co.....	2,500
JUNE 6.—By the <i>Trignac</i> =Bordeaux: W. L. Gough Co.....	7,000
JUNE 8.—By the <i>Caronia</i> =Liverpool: George A. Alden & Co.....	11,500
W. L. Gough Co.....	3,500
JUNE 9.—By the <i>Potsdam</i> =Rotterdam: A. T. Morse & Co.....	6,500
JUNE 10.—By the <i>Paderland</i> =Antwerp: George A. Alden & Co.....	145,000
Poel & Arnold.....	22,000
A. T. Morse & Co.....	13,500
Robinson & Co.....	20,000
Joseph Cantor.....	7,000
Muller, Schall & Co.....	6,500
JUNE 11.—By the <i>Umbria</i> =Liverpool: George A. Alden & Co.....	22,500
General Rubber Co.....	4,500
JUNE 11.—By the <i>Pennsylvania</i> =Hamburg: George A. Alden & Co.....	22,500
Poel & Arnold.....	14,000
JUNE 12.—By the <i>Cedric</i> =Liverpool: Poel & Arnold.....	45,000
JUNE 12.—By the <i>Valletta</i> =Lisbon: George A. Alden & Co.....	11,000
JUNE 13.—By the <i>La Saraje</i> =Havre: A. T. Morse & Co.....	30,000
George A. Alden & Co.....	22,000
JUNE 16.—By the <i>Zeeland</i> =Antwerp: W. L. Gough Co.....	11,500
Rubber Trading Co.....	3,500
JUNE 18.—By the <i>Patricia</i> =Hamburg: W. L. Gough Co.....	38,000
George A. Alden & Co.....	22,000
Rubber Trading Co.....	13,500
Poel & Arnold.....	4,500
JUNE 18.—By the <i>Majestic</i> =Havre: George A. Alden & Co.....	65,000

JUNE 19.—By the <i>Mauretania</i> =Liverpool: General Rubber Co.....	11,000
JUNE 22.—By the <i>Arabic</i> =Liverpool: General Rubber Co.....	50,000
EAST INDIAN.	
MAY 25.—By the <i>Philadelphia</i> =London: A. T. Morse & Co.....	*11,500
MAY 26.—By the <i>Minnehaha</i> =London: George A. Alden & Co.....	70,000
Robinson & Stiles.....	7,000
MAY 27.—By the <i>Oceanic</i> =Liverpool: Poel & Arnold.....	*17,500
JUNE 2.—By the <i>Minneapolis</i> =London: General Rubber Co.....	6,500
George A. Alden & Co.....	25,000
A. T. Morse & Co.....	3,500
JUNE 4.—By the <i>Teutonic</i> =London: P. E. & Arn Id.....	11,000
A. T. Morse & Co.....	9,000
JUNE 8.—By the <i>Minnetanka</i> =London: A. T. Morse & Co.....	17,000
George A. Alden & Co.....	9,000
Robinson & Co.....	16,000
JUNE 8.—By the <i>New York</i> =London: A. T. Morse & Co.....	9,000
JUNE 10.—By the <i>Paderland</i> =Antwerp: Geo. A. Alden & Co.....	*6,000
JUNE 10.—By the <i>St. Patrick</i> =Singapore: Otto Isenstein & Co.....	40,000
George A. Alden & Co.....	15,000
Poel & Arnold.....	19,000
JUNE 2.—By the <i>Krona</i> =Columbo: A. T. Morse & Co.....	*5,500
JUNE 20.—By the <i>Wray Castle</i> =Singapore: Otto Isenstein & Co.....	22,500
JUNE 22.—By the <i>Minnehaha</i> =London: Robinson & Co.....	5,500
Muller, Schall & Co.....	2,500
*Denotes plantation rubber.	
GUTTA-JELUTONG.	
JUNE 10.—By the <i>St. Patrick</i> =Singapore: Heabler & Co.....	225,000
W. L. Gough Co.....	60,000
L. C. Hopkins Co.....	125,000
JUNE 12.—By the <i>Cedric</i> =Liverpool: Robinson & Co.....	65,000
Kurth & Wolff.....	22,000
JUNE 20.—By the <i>Wray Castle</i> =Singapore: Heabler & Co.....	225,000
M. Joachimson.....	100,000
W. L. Gough Co.....	55,000
GUTTA-PERCHA.	
JUNE 18.—By the <i>Patricia</i> =Hamburg: Robert Soltan & Co.....	7,000
BALATA.	
MAY 25.—By the <i>Korona</i> =Demerara: George A. Alden & Co.....	6,500
JUNE 5.—By the <i>Norarr</i> =Trinidad: Frame & Co.....	2,500
JUNE 8.—By the <i>New York</i> =London: Earle Brothers.....	13,500
JUNE 18.—By the <i>Guiana</i> =Demerara: Frame & Co.....	13,500
Middleton & Co.....	2,000
CUSTOM HOUSE STATISTICS.	
PORT OF NEW YORK—MAY.	
Imports:	Pounds. Value.
India-rubber.....	6,496,019 \$3,723,456
Balata.....	9,712 4,474
Gutta-percha.....	17,087 10,021
Gutta-jelutong.....	178,325 13,440
Total.....	6,701,143 \$3,751,397
Exports:	
India-rubber.....	67,351 40,215
Reclaimed rubber.....	47,458 6,687
Rubber scrap imported....	166,889 11,605
BOSTON ARRIVALS.	
MAY 1.—By the <i>Arcadia</i> =Hamburg: W. L. Gough Co., Africans.....	15,000
MAY 4.—By the <i>Bathiana</i> =Hamburg: Poel & Arnold, Africans.....	4,500
MAY 27.—By the <i>Saxonia</i> =Liverpool: George A. Alden & Co., Africans.....	11,500
MAY 22.—By the <i>Kennebec</i> =Singapore: George A. Alden & Co., Gutta-jelutong....	381,000
Poel & Arnold, Gutta-percha.....	13,000
MAY 23.—By the <i>Templemore</i> =Liverpool: New York Commercial Co., Guayule....	190,000
Total.....	615,000



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JULY 1, 1908.

No. 4.

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United States Rubber Imports.

FOR TEN MONTHS ENDING APRIL 30.

	1906.	1907.	1908.
United Kingdom .....pounds	7,541,338	8,711,094	4,147,983
Germany	3,208,255	3,799,499	2,114,262
Other Europe	7,070,708	7,749,179	5,243,147
Central America and British Honduras	1,066,378	971,533	818,198
Mexico	1,091,983	5,510,253	6,987,337
Brazil	26,033,862	34,907,630	25,073,701
Other South America.....	1,568,850	1,638,645	1,338,445
East Indies	1,667,605	1,834,423	989,015
Other countries	24,738	29,503	36,683
Total	49,273,717	65,150,659	47,348,771
Value	\$38,519,189	\$50,578,759	\$28,496,365
Average per pound.....	78.1 cents.	77.6 cents.	60.1 cents.

Plantation Rubber From the Far East.

STATISTICS FOR FOUR MONTHS ENDING APRIL 30.

EXPORTS FROM THE FEDERATED MALAY STATES.

	1907.	1908.
Perak .....pounds	71,853	137,507
Selangor	389,784	551,730
Negri Sembilan.....	136,273	275,943
Pahang	nil	nil
Total	597,910	965,180

TOTAL EXPORTS FROM MALAYA (INCLUDING ABOVE).

	Singapore.	Penang.	Total.
To Great Britain.....pounds	538,933	267,733	806,666
To Other Europe	28,667	56,400	85,067
To Japan	3,333	.....	3,333
To Australia	6,433	.....	6,433
To Ceylon	75,867	22,959	98,826
Total	653,233	347,092	1,000,325
Same months, 1907.....	413,834	46,961	460,795

—Barlow & Co.'s Prices Current.

RUBBER THE PRODUCE OF CEYLON.

[These figures carry the record up to May 4.]

	1907.	1908.
To Great Britain.....pounds	106,590	125,574
To Belgium	1,820	.....
To France .....	.....	119
To Germany	9,837	8,743
To Italy .....	.....	880
To India	112	896
To Australia	799	10,276
To United States.....	41,407	72,280
Total	160,625	218,768

Antwerp.

ANTWERP RUBBER STATISTICS FOR MAY.

	1908.	1907.	1906.	1905.	1904.
Stocks, April 30.....kilos	717,913	461,573	880,458	635,875	441,621
Arrivals in May.....	415,404	644,324	656,759	287,333	737,526
Congo sorts	337,368	557,136	536,564	214,751	685,086
Other sorts	78,036	87,188	120,195	72,582	52,440
Aggregating	1,133,317	1,105,879	1,537,217	923,208	1,179,147
Sales in May.....	361,740	252,983	811,966	576,104	436,932
Stocks, May 31.....	771,577	752,914	725,251	347,104	742,215
Arrivals since Jan. 1.....	2,144,762	2,281,955	2,728,448	2,220,288	2,554,426
Congo sorts	1,859,791	1,938,228	2,110,079	1,757,649	2,128,132
Other sorts	284,971	343,727	618,369	462,639	426,294
Sales since Jan. 1.....	2,380,079	2,187,225	2,738,384	2,414,545	2,423,111

RUBBER ARRIVALS FROM THE CONGO.

APRIL 22.—By the steamer *Albertville*:

Bunge & Co.....(Société Générale Africaine) kilos	44,000
do	23,500
do	9,600
do	22,200
do	27,300
do	1,500
Société Coloniale Anversoise.....(Société Ikelamba)	4,500
do	4,200
do	57,300
L. & W. Van de Velde.....(Cie. du Kasai)	2,600
Total	196,700

MAY 13.—By the steamer *Leopoldville*:

Bunge & Co.....(Société Générale Africaine) kilos	70,000
do	45,500
do	5,100
do	14,000
do	9,000
do	8,000
do	16,000
do	2,200
Société Coloniale Anversoise.....(Belge du Haut Congo)	14,900
do	16,100
L. & W. Van de Velde.....(Cie. du Kasai)	168,000
do	4,000
M. S. Cols.....	350
Total	373,150

JUNE 2.—By the steamer *Bruxellesville*:

Bunge & Co.....(Société Générale Africaine) kilos	44,200
do	6,800
do	7,600
do	123,200
do	2,200
do	1,400
do	9,700
Société Coloniale Anversoise.....(Belge du Haut Congo)	950
do	4,850
do	11,650
Société Générale de Commerce.....(Alimaienne)	8,400
(Charles Dethier.....(American Congo Co.)	2,500
L. & W. Van de Velde.....	1,500
Total	224,950

LITTLE CHANGE
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 the difference between loss and profit.
 business is to improve processes.
D'K J. MAYWALD, F. C. S.,
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Vol. XXXVIII. No. 5.

AUGUST 1, 1908.

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THE CURSE OF THE CALLOW CRITIC

YOUTHFULNESS is not a crime, nor is callowness, but it is often very trying. The unfledged gawky cockerel in time becomes the cock of the walk. Then he may strut and crow and be admired, but not until then.

Each year a fresh crop of fledglings is graduated from excellent technical schools and turned into the manufacturing establishments of the land. Fresh from well equipped laboratories, crammed with exactness, burning to prove themselves, they want to change something. Some are set to testing rubber goods to see if they are up to specification. With what infinite care do they search for minute variations in color, texture, cure, weight, tensile strength. With what joy do they reject goods that are not in every respect what the specification demands, no matter whether they will do the work or not.

How severely just they are, and how they do clog the wheels of progress in their reverence for non essentials. If, in an order of black valves, one had a bluish cast would it pass, supposing that it were perfect in every other particular, that it answered every test, and supposing it were certain that it would outlast all of the rest? Suppose its rejection would entail much delay and loss of money; would it be passed? No, indeed.

The callow critic, bless his honest boyish heart, isn't trying to get things done! He is posing before his admiring self as a scientific, impartial judge, who knows not mercy, common sense, or business. Some day he will awake to his own absurdity and be a help to his employer and to the manufacturer. Then he will get a better job, and another fledgling will take his place and vex the paternal rubber man. Like the poor, the callow are always with us.

THE LONDON RUBBER CONGRESS.

THERE are indications that the coming International Rubber Exhibition will bring together in London the most important assemblage of men interested in rubber that has ever occurred in the history of the trade. There will be producers of and dealers in crude rubber and the materials used in connection therewith in the industry; makers of the machinery used in handling rubber, whether on plantations or in the manufacture of goods; representatives of every branch of the rubber goods manufacturing interest; botanists, chemists and other scientific experts whose work tends to the development in one way or another of the rubber business. Of course it is specimens of rubber and of appliances for dealing with rubber that will be considered by the casual observer as forming the exhibition; these are the articles to display which the Olympia building has been secured, and which will figure in the exhibition catalogues. But these displays without the attendance of practical rubber men would be of little benefit. It is what we shall designate as the coming Rubber Congress that will count.

There are still too many people who underestimate the value of industrial exhibitions, and especially those of an international character—people who consider such undertakings failures if the receipts do not equal the cost. As well might the public school system be voted a failure because it costs so much and brings no direct income. The industrial exhibition is educational in a broader sense than any other modern institution, and is to be credited to a large degree with the industrial progress of the last half century.

Not alone the country where an exhibition is held profits—that is a mere incident—but the whole world, more or less directly. The Philadelphia Centennial of 1876 doubtless was worth to America a thousandfold more than it cost, but America did not profit alone. The participation thereof of Germany, and the assertion by the German commissioner that the machinery exhibits from his country were "billig und schlecht" (cheap and nasty) led to the awakening of the manufacturing population of that country to their true standing in an important branch of production, and to a serious and ultimately successful effort to retrieve their reputation.

This may seem a digression from rubber, but there have been no rubber exhibitions in the past from which to draw illustrations for the purpose of this article. As

for the rubber men who will gather at London, we believe that it will be claimed by no one that he knows all about the business in which he is engaged, or that his own country can learn nothing about rubber from the practice in other countries. Hence the benefit of looking beyond the confines of one's own factory or office—whether to gain ideas for improving one's work at home or to gain a better footing in foreign trade.

There is one feature of the London Rubber Congress in which there is room for no element of competition—the bringing together of producers of rubber and those who consume it as manufacturers. A better mutual understanding on the part of these classes can hardly fail to benefit the whole trade. Whoever produces rubber should understand the wants of the factory, while the manufacturer will benefit by being on more intimate terms with the producers of the raw material he uses. London will offer the opportunity this year for the beginning of this new acquaintance, which we believe cannot be begun too soon or continued too long.

RUBBER SUPPLIES AND PRICES.

THE total receipts of rubber of all grades at Pará for the crop year ended June 30 last were 36,654 metric tons, or 80,638,800 pounds. This figure has been exceeded only once, in 1906-'07, when the arrivals totalled 38,005 tons. The first year in which the record reached 30,000 tons was 1901-'02, and the average for that and the succeeding four years was 31,596 tons, or 69,500,000 pounds. Taking five-year periods, we find that the annual arrivals of rubber at Pará have averaged as follows:

Five years ending June 30, 1893.....	tons	17,122
Five years ending June 30, 1898.....		20,940
Five years ending June 30, 1903.....		27,000
Five years ending June 30, 1908.....		34,600

During the era covered by the table the average annual production has more than doubled. From the first beginnings of the rubber trade there has been an almost steady increase in the exports from Pará, and the best rate of the past is not only being maintained, but exceeded. A question which now concerns very many persons is whether the production of rubber in the Amazon regions will continue to expand, and what will be the effect upon prices.

It seems to us that so far as the real "Pará" rubber is concerned—the product of the *Hevea*—the Amazon output will keep on growing until, perchance, it is checked by competition elsewhere. First to be utilized in the industries, Pará rubber still holds first place in the world's markets. There are uses for rubber for which this particular class of material is indispensable. There are certain demands for goods which must be met, regardless of the cost of crude rubber, and the forests have always responded to every demand upon them for rubber, even if manufacturers have had to pay more and more for it.

The native supplies of *Hevea* are seemingly inexhaustible, but their yield of rubber is held in check by the limited labor force available, and by the remoteness or lack of accessibility of the trees. But gradually these drawbacks have been overcome to an extent, as is moved by the fact that more rubber comes out every year. The fixed population of rubber gatherers grows somewhat, and the means of reaching rubber forests and of shipping their product are improving all the while.

These facts, considered alone, may not appear encouraging to the rubber planting interest. But the point may be made here that the increase in the output of rubber has been due to the growing demand for rubber goods—a demand so pressing as to put up the price of the raw material in spite of the constantly larger production. Should present conditions continue, it would seem reasonable to look for a gradual extension of the rubber areas worked in the Amazon region, to meet an ever growing demand for rubber goods, with prices of crude rubber maintained at the present or a higher level.

In considering the continuation of "present conditions," account must be taken of other sources of forest rubber than the *Hevea* species. Every now and then rubber from a new source is reported, with a rapid increase in output until the zenith is reached, when an equally rapid decline occurs. Thus the rubber exports from Colombia increased in a few years from 250,000 pounds to nearly 7,000,000, falling again to the first figure named. Or take Lagos in West Africa—56 pounds of rubber shipped in 1893; 6,484,363 pounds in 1896; and only 131,311 pounds in 1903, ten years from the beginning. And Mexico, after exporting 142,655 pounds of rubber in the fiscal year 1896-'97, shipped 10,321,247 pounds in twelve months a decade later, putting Mexico second in rank among rubber producing countries. Of Mexico's present output probably 95 per cent. is "guayule," the supply of which is bound to go the way of all forest rubber sources with the exception of the *Hevea*—trees which survive tapping for a lifetime.

It must be noted, too, that not all the rubber shipped down the Amazon is "Pará." There are millions of pounds annually of "caucho," a rubber obtained from a different species than *Hevea* by felling the trees and exhausting the supply. In brief, the tendency is toward the practical disappearance of the various kinds of forest rubber other than *Hevea*. Of this sort there is enough, probably, to meet the world's total demand for rubber, but the output is limited, as already pointed out, by lack of accessibility and small native labor supply.

The producers of plantation rubber have for their encouragement, therefore, the prospect of a continued and increasing demand for rubber, plus a decline of native supplies. Without plantations the supply of rubber must in time diminish, since no prices within reason would lead to the exploitation of great areas of *Hevea* rubber. The danger of overproduction, therefore, does not seem imminent, so long as there are so many single rubber fac-

tories each consuming more rubber than is produced in all Ceylon and Malaya, and others are likely to increase their consumption as more plantations are opened.

We do not overlook the fact that *Castilloa* and other rubber species than *Hevea* are being cultivated successfully, but not in this generation does it seem likely that their product will more than offset the exhaustion of natural supplies of rubber at the ordinary rate from trees of the same species.

THE MANY BOOKS ON RUBBER

IF the making of many books on rubber should continue long at the present rate, we may expect to see Mr. Andrew Carnegie called upon to supply a library building large enough to hold them all. The present volume of the literature of rubber is all the more notable when compared with the condition which existed in the early days of THE INDIA RUBBER WORLD, when to repeated inquiries for books treating of this or that branch of the rubber interest the answer had to be made that no such works existed—or at least nothing practical.

One result of the coming rubber exhibition at London is likely to be some important additions to the world's stock of printed matter pertaining to rubber, just as happened when Ceylon, two years before, held a rubber exhibition with such marked success. And, as will be seen on another page, the annual prize award by the Colonial Museum of the Netherlands is to go next year to the author of the best essay on india-rubber or its applications. The honor of possessing a medal from the museum at Haarlem is not to be lightly esteemed, so that we may expect the prize committee to have to deal with the work of many competitors in making the award on rubber.

The rubber interest in every branch is to be congratulated upon the growing habit among workers in rubber of writing on the subject. The greatest advancement is made in that industry in connection with which there is the freest exchange of experiences and opinions, and the rubber trade has been handicapped in the past by a too general disposition on the part of workers in it to guard mysteries, many of which doubtless had better have been discarded. We do not doubt that the success attained by the Ceylon and Straits rubber planters has been due in large part to the open-minded spirit of co-operation manifested by the planters. Not one of these, we are sure, is worse off to-day by having helped his neighbor planter in getting a start in the new business of rubber culture, while the whole world is benefited by the results of the planters' work. We hope to see the exchange of facts and theories grow—whether in the manufacturing or cultural branches of the rubber interest—and the more books the better, so long as based upon intelligent and honest effort.

A RUBBER "TRUST" IN RUSSIA, such as is reported to have been formed, seems about the natural thing in the world. There the government seems disposed to regulate everything, and the regulation of one big concern in a given industry probably is simpler than having to deal with more. It is hardly to be expected, however, that the government will seek absolutely to prevent other rubber factories from being started in Russia, in which event we may expect to see history repeated in Russia, as elsewhere, and new factories coming upon the market for sale.

SINCE THE INDIA RUBBER WORLD has done its share in giving publicity to the plans of The Amazon Trading and Development Co. (Cleveland, Ohio) and without any charge—it is rather disappointing to have to note that, as far as heard from, the rubber trade of the world has not yet been revolutionized. The company's prospectus has been discussed in our exchanges from points as far apart as Rio de Janeiro and Kuala Lumpur, in all of which the people are impatiently waiting to see the company send the price of rubber up to \$150 a pound.

THERE IS NO INDICATION OF TRADE DEPRESSION in the details of rubber goods exports from the United States during the first 11 months of the fiscal year beginning July 1 last. The figures are larger for every class of goods specified, and the total for the period is 11 per cent. greater than for the corresponding months of any previous year. The gain was most marked, however, in rubber footwear.

PRIZE FOR AN ESSAY ON RUBBER.

IN accordance with a resolution adopted at the annual meeting of the board of directors for 1908, the managing committee of the Colonial Museum of Haarlem will award a gold medal, or a sum of 150 florins [= about \$60], for the best essay on the subject of Caoutchouc or Rubber.

The committee wishes to make the field to be covered by this prize essay as broad as possible, and parties submitting essays need not, therefore, confine themselves to the cultivation of caoutchouc and subjects connected therewith, such as the gathering of the milk sap, the coagulating and drying, inasmuch as technical essays dealing with the further industrial preparation, manufacture and application of rubber goods will likewise be considered. Finally, the committee will likewise be pleased to receive reports of scientific investigations on the subject of rubber, both chemical and botanical, including determination of the commercial value of the product, and intends to exclude from competition only such essays as consist merely of extracts and recapitulations derived from the current literature on the subject of rubber. The committee consequently requires all essays to contain at least some addition to our present knowledge of rubber, or else to add to the many purposes for which this crude material is adapted, some novel application for industrial or domestic use or for purposes connected with the fields of hygiene, sport, etc. In this connection the committee urgently requests that attention be paid to the fact that an International Rubber Exposition will be held in London in September, 1908, and that it will, therefore, be advisable for the parties who intend to enter this present competition to duly consider, in composing their essays, the results and publications of the said exposition.

In case it should be considered advisable, a gold and silver medal (or 100 florins) will be awarded in addition to the first prize, already referred to. Silver or bronze medals will, however, be awarded for all such essays as shall be considered to possess sufficient intrinsic merit.

All essays, which may be either in the Dutch, English, German, or French language, are to be addressed on or before December 31, 1909, to the director of the museum, at Haarlem, Netherlands.

THE EDITOR'S BOOK TABLE.

ON THE PLANTATION, CULTIVATION, AND CURING OF PARA Indian Rubber (*Hevea Brasiliensis*). With an Account of its Introduction from the West to the Eastern Tropics. By H. A. Wickham, sometime commissioner for the introduction of the Para (*Hevea*) Indian rubber tree for the government of India and inspector of forests B. H. With illustrations by the author. London: Kegan Paul, Trench, Trubner & Co., Limited. 1908. [Cloth. 8vo. Pp. vi + 78 + 10 plates. Price, 3s. 6d., net.]

THIS is a book of no little historic interest, on account of the agency of its author in the introduction into India of the original specimens of *Hevea Brasiliensis* from which have been derived practically all of the millions of trees of this species now under cultivation in the old world. Mr. Wickham reproduces from an earlier work of his, published in 1871, a sketch of the leaf and fruit of the South American rubber tree, which he believes to have been probably the first drawing of this species ever made from nature. This drawing, with the specimens sent to the royal gardens at Kew, enabled the late Sir Joseph Hooker, then director, to determine botanically the tree producing "Para rubber." The name given was *Hevea Brasiliensis*, though the specimens in question really came from the headwaters of the Orinoco.

Mr. (later Sir) Clements R. Markham, then connected with the India office, and who had successfully introduced *Cinchona* (Peruvian bark) cultivation into India, was interested in following this up by introducing rubber culture there, and the result was the despatch of Mr. Wickham to the Amazon to procure seeds. The record of his experiences is an interesting story of adventure, and his expedition was eminently successful. He was able to obtain upwards of 7000 seeds of *Hevea* from large trees which were being or had been worked for rubber in the forests covering the broad plateaux between the Tapajós and Madeira rivers. These seeds were sent to Kew and germinated, and the plants sent to the Far East, notably to the botanic garden at Peradeniya. Mr. Wickham points out that his suggestions regarding the proper *habitat* of *Hevea* were not adopted, and hence the results attained in the case of many of the plants were less satisfactory than might otherwise have been the case. In support of this contention Mr. Wickham's original suggestions are reprinted in this book.

Mr. Wickham, who still maintains a lively interest in rubber, and is a rubber planter himself, is under the impression that it is a mistake to clear land for *Hevea*, as is now done in Ceylon and Malaya, asserting that this species is to be treated rather on lines of forestry than those applicable to garden or orchard planting. He considers the loss of *humus* and surface soil involved in the practice of burning over land a very serious matter, and his plan is designed to conserve as far as possible the natural plant food accumulation of the surface soil. He recommends wide planting and the "topping" of the young trees to assist them in attaining large girth in the lower bole—the crop area of the trunk. He deprecates cultivation of the soil around the *Hevea* for the reason that it damages the roots near the surface, and *termites* (white ants) are prone to attack the wounded roots of young trees with the result of ultimately killing them.

Mr. Wickham is strongly inclined to favor the smoking of *Hevea* rubber on plantations, feeling that the superior quality of Amazon rubber is due in part to the smoke cure. By the way, he has patented a machine, illustrated in the book, which provides a rotating device for exposing thin layers of latex for treatment by smoke, the rubber being coagulated on the inner surface of a cylinder. Mr. Wickham believes in planting rubber for rubber's sake, and not in connection with any catch crops, and he agrees with Mr. Herbert Wright that the proper system of tapping involves the drawing of supplies of latex by merely cutting, and not excising or stripping off lactiferous tissues. This book no doubt will be read with wide interest, though it is not offered as a complete manual of rubber culture.

No explanation is offered by the author of his use of the term

"Indian rubber"—a form of spelling which does not appear in any other modern work on the subject.

YEAR BOOK OF THE RUBBER PLANTERS' ASSOCIATION OF MEXICO, 1907-08. Mexico: Printed at Hall's Printing Establishment. 1908. [Paper. 8vo. Pp. 45.]

This is the official report of proceedings at the first general meeting of the Rubber Planters' Association of Mexico, held in October last, prefaced by a brief history of the movement which led to the formation of this body.

IN CURRENT PERIODICALS.

NOTES ON *Termes gestivi* and Other Termites [white ants] Found on Rubber Estates in the Federated Malay States. By H. E. Pratt—*Agricultural Bulletin* of the Straits and Federated Malay States, Singapore. VI-5 (May, '08). Pp. 157-169.

Observations sur la Culture, l'Exploitation et le Rendement du "Manioba." By Augusto Cardozo, governor of Inhambane, Portuguese East Africa.—*Journal d'Agriculture Tropicale*, Paris. VIII-84 (June, '08). Pp. 193-197.

THE LATE HENRY B. CHAMBERLAIN.

NOT only as a matter of history but because of his many friends in the rubber trade, THE INDIA RUBBER WORLD now reproduces the only photograph in existence of the late Henry B. Chamberlain.

Mr. Chamberlain, it will be remembered, was for many years a manufacturing chemist in Waltham, Massachusetts. In the early "eighties" he began the manufacture of g. Iden sulphuret of antimony, with a small factory in Newtonville, Mass., inventing not only the process used but designing the machinery. He manufactured and sold the product himself and thus came in contact with all of the rubber manufacturers who used antimony. In 1899 the business was converted into a corporation known as the Atlas Chemical Co.,



THE LATE H. B. CHAMBERLAIN.

Mr. Chamberlain died November 2, 1905 in his seventy-second year, leaving his interest in the business in trust for the benefit of his brother and others. Mr. Chamberlain has very much of a character—witty and oftentimes caustic in his remarks, but always with a kindly twinkle in his eye that belied his sometimes surprisingly crisp rejoinders. He was exceedingly well informed, and his visits to the various manufacturers were always considered treats.

HYDROLENE B-260.

A RUBBER assistant that is now being used in connection with the reclaiming of rubber, and also rubber compounding, is known as Hydrolene B-260. From a sample submitted to THE INDIA RUBBER WORLD, it would seem to be a petroleum product, and is used in reclaiming rubber, instead of stock oil or residuum. The manufacturers advise the use of from 3 to 10 per cent. in reclaiming, and direct that it be cut in small pieces, and thoroughly mixed with powdered shoddy before devulcanization. It is said that after devulcanization no trace of Hydrolene can be found. Used as a rubber substitute, from 10 to 25 per cent. is advised, and the claim is that it prevents drying out, and blistering, and also mitigates the harsh action of free sulphur.

The Hodgman Rubber Factories.

A DESCRIPTION of the factories of the Hodgman Rubber Co. (New York), to be adequate, covers so much of the history of the rubber trade at its best that one hardly knows where to begin. There are, in fact, two separate plants—one at Mount Vernon, New York, consisting of a four-story building, 220 x 40 feet, which is used wholly for the making up of rain coats and mackintoshes, the cloth for the latter being prepared at the other factory at Tuckahoe.

Speaking accurately, the other factory is really a number of plants grouped on both sides of the Bronx river. Up to a year ago the work was done in the stone mill originally purchased by Daniel Hodgman in 1851, and in a number of large detached wooden and brick buildings, each of which is devoted to some special line of Hodgman product. Within the last year, however, a fine reinforced concrete building, five stories in height and containing some 60,000 feet of floor space, has been erected and some of the departments run in the separate buildings have been moved into the new one. Each of these factories has its separate boiler and engine plant, but so joined that each set of boilers can be used in connection with the other. This is possible because the Bronx is a small river and the factories close to its banks (in spite of the historic fact that during the war of the revolution the English government ordered its war vessels to proceed up the Bronx to White Plains and wipe out the Yankees).

It is interesting to note, by the way, that this river Bronx is the dividing line between the village of Tuckahoe and the city of Yonkers. The original plant, the executive offices, and most of the land owned by the company are in Yonkers, while the new factory is in Tuckahoe. The power plant of the Hodgman factories consists of 8 boilers of 100 h.p. each, 2 Cooper-Corliss tandem compound engines of 450 h.p. each, 3 generators for electric lighting and for running machinery in different departments of the factory, and an unusually good equipment of fire, feed and other pumps.

The grinding and calendering rooms in the factories, particularly in the new one, are wonderfully effective and well arranged. The equipment of machinery, roughly, is 4 washers, 12 mixers and warmers, 3 jumbo mixers, and 10 regular and special calenders. In the new mill the mixing and calendering equipment is on the first floor, with the shafting below the floor level, and the work so arranged that the washed rubber goes directly to the vacuum dryers, and thence to the gum storage room and next to that the compound room.

As might be expected, the factory is fitted with many special machines, several being the invention of Mr. F. A. Hodgman, superintendent of the factory. An extension building, also of reinforced concrete, connecting from the first floor of the main building, is utilized for a huge vulcanizing room, where steam-cured goods, such as druggists' sundries of all sorts, and white goods are cured. The floor above in the same building is the dry heater room where there are 6 large dry heaters, and place for 6 more.

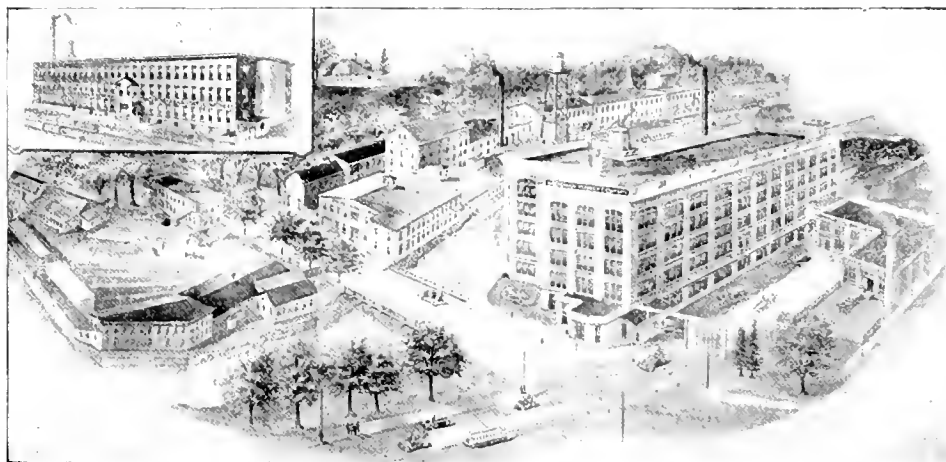
To return to the main new building, the departments naturally divide themselves about as

follows: On the ground floor, washing, drying, mixing, and calendering. The second floor contains the general assembling room for all the specialties made in the factory, and one of the finest paper box plants that could possibly be installed. The third floor contains the cutting room, the band department, the fine cloth storage department, and the department where fabrics are examined before being converted. The fourth floor is devoted to the making up of clothing and various specialties, and



THE LATE DANIEL HODGMAN.
[Founder of the Hodgman Rubber Factories.
Born 1833; died 1874. From an old
print.]

the top floor is devoted wholly to the manufacture of druggists' sundries and specialties, and is a wonderfully attractive and commodious making-up room. The roof of the building is surrounded by a 6-foot parapet. The entire equipment of the new mill is strictly up to date, furnishing every modern advantage for the most satisfactory and economical production of the various lines which this company manufactures. The establishment is thus one of the oldest as well as one of the most modern rubber factories.



THE HODGMAN RUBBER FACTORIES.

[View of the plant at Tuckahoe, including the extensive new building. The view at the upper corner, on the left, is of the factory at Mount Vernon.]

THE LONDON RUBBER EXHIBITION.

CONTINUED evidence comes to hand of the interest which is felt in every branch of the rubber interest in the International Rubber and Allied Trades Exhibition, to be held in London September 14-26 next. In the last two issues of THE INDIA RUBBER WORLD various details have appeared regarding this event, and later news confirms what has been said already regarding the activity in the way of preparations.

THE idea of holding an international rubber exhibition at London this year appears to have been suggested first by Mr. Harold Hamel-Smith, in view of the great success of the Ceylon rubber exhibition two years ago. The nucleus of the present advisory committee was formed among Mr. Hamel-Smith's personal friends interested in rubber, after which the service of an experienced exposition manager was secured, and the work of organization has progressed until success is now assured. Mr. Hamel-Smith is the editor of *The Tropical Life* (London), a high class publication devoted to rubber and other planting interests in the tropics, on which subjects he is an authority of note.

THERE have been added to the advisory committee the names of his Excellency the governor of Pará, Dr. Augusto Montenegro; also Dr. Jacques Huber, director and curator of the Pará museum. All parcels or rubber forwarded from Pará to the exhibition will be exempt from export duty, and the Booth Steamship Co. have promised free transportation for such rubber.

THE announcement that Mr. E. E. Buckleton, of the North Western Rubber Co., Limited (Liverpool), is arranging for a congress of all of the European rubber manufacturers in London at the time of the International Rubber Exhibition is of more than passing interest. No man knows more European rubber manufacturers than Mr. Buckleton, and no one is better known or better liked. His ever present optimism, his constant geniality, and his genuine good fellowship, are very much appreciated, and the congress is sure to be a great success.

THE Dutch government, as mentioned already in these pages, has appointed a commission to assure the adequate representation at the rubber exhibition of Holland and her colonies. In this connection *De Indische Mercur* remarks: "The exposition may be considered as highly important for Surinam (Dutch Guiana), more especially in relation to the export of balata. The government of Surinam has consequently expressed its willingness to pay a considerable part of the expense incurred for sending exhibits from the said colony."

Active steps in connection with the rubber exhibition have been taken by the Algemeen Nederlandsch-Indisch Rubber Syndicaat (General Dutch Indies Rubber Syndicate), the headquarters of which are at Batavia, Java. To insure a representative display of rubber products of the Dutch East Indies, the syndicate has formed a committee, under the presidency of Dr. M. Treub, the eminent director of 's Lands Plantentuin (the botanical institute), at Buitenzorg, Java. Planters are urged to interest themselves particularly in *Ficus elastica* exhibits, on account of the success attained with this species in Java and Sumatra.

MEXICO will be represented by a display of plantation rubber (*Castilloa elastica*), from which much is expected. As these pages go to press the specimens which will go to make up this display are being shipped from Vera Cruz to London. There they will be in charge of Mr. Horace E. Levesley, managing director of the Mexican Rubber Co., Limited, and Mr. H. Hamel-Smith, editor of *London Tropical Life*. The Mexican *Herald* says that twenty five or thirty plantations in Mexico will make exhibitors at Olympia, in September, including—

Mexican Rubber Co., Limited—Plantation "La Esperanza," in Oaxaca.

Orizaba Rubber Plantation Co.—Plantation "Chival," in Chiapas.

Mexican Mutual Planters' Co.—Plantation "La Junta," in Vera Cruz.

Mexican Plantation Association—Plantation "Lumija," in Chiapas.

La Zacualpa Rubber Plantation Co.—Plantation "La Zacualpa," in Chiapas.

The director of the guayule experimental planting station maintained by the Continental-Mexican Rubber Co., who is a member of the Planters' Association, is organizing a comprehensive exhibit of guayule and its rubber product for the Olympia show.

THE committee think that in this first exhibition it will not be advisable that they should take upon themselves the arranging of rubber competitions for the whole world. They suggest that the exhibitors of each country, if they wish to do so, arrange competitions among the producers of that country. Should any rubber producing country wish to arrange special prizes, they are at liberty to do so, and the London committee are prepared to supply handsome diplomas, free of charge, to exhibitors to whom awards are made, but they do not supply medals. If requested, however, they will procure medals at cost price for committees in other countries. Those intending to have competitions are requested to arrange for the judging.

MESSRS. GOW, WILSON & STANTON, Limited, an important firm of tea and rubber and share brokers, of London, who have from the beginning taken a deep interest in the development of rubber culture, are to offer as a special award, a beautiful silver bowl, valued at 25 guineas [= \$127.75], for the most economical and complete process for preparing plantation Pará rubber from the latex, which will give the best and most uniform product on a large scale. Such a prize, coming from such a source, is not only sure to attract much attention, but to bring forth something of real value to rubber planters. It is to be hoped that every one familiar with the gathering of Pará rubber will compete, not so much for the prize itself, but for the valuable service that the various suggestions will afford, in bringing about a practical, cheap, and successful method of handling the latex on a large scale. The conditions that will have to be complied with by competitors will gladly be supplied by the management of the International Rubber Exhibition.

LIPTON'S TEA PROFITS.

LIPTON, LIMITED, the great British tea trading company, report that their volume of business for the past year exceeded by upwards of £1,000,000 that for any previous year. The company was formed ten years ago to take over the business of Sir Thomas J. Lipton, who since has filled the office of chairman of the board. Meanwhile the net profits—after providing £207,868 for depreciation—have been £1,088,403 16s. 10d. [= \$8,217,055.28]. The dividend on the ordinary shares has averaged 8.35 per cent. for the ten years. The share capital has been £2,000,000 and the debenture capital £500,000. At the meeting on June 10 it was voted to increase the share capital by £250,000, raising the total of the company's issues to £2,750,000 [= \$13,382,875].

Space is given here to these figures because they have a bearing upon the prosperity of British Asia—the source of the Lipton teas—and whatever tends to general prosperity there may be expected to have a favorable effect upon the development of rubber culture. Besides, Sir Thomas Lipton is believed to have invested some of his large profits from tea in rubber plantations, and he may yet figure prominently in this new field.



THE NEW ENGLAND RUBBER CLUB AT POINT SHIRLEY.

New England Rubber Club's Midsummer Outing.

YES, it was an unusually high tide at Point Shirley Club, Winthrop, Mass., on the afternoon of July 15—a tide of jolly, friendly, musically inclined rubber men, who to the number of 150 odd, members of the New England Rubber Club and guests, landed from the steamer *Winthrop* to enjoy one of the fish dinners that from time immemorial have made the place famous.

To begin at the beginning, the announcement circular of the outing was one of those rare works of art embellished with grotesque engravings that Mr. W. H. Gleason some years ago sprung on the Club, and it attracted much attention and made lots of fun.

The day's program covered a golf competition at the Country Club, Brookline, for the forenoon; a trip down the harbor on the steamboat *Winthrop* for the afternoon; a landing at Fort Andrews, where the Club was the guest of the officers of the Army Post there; a baseball game, bathing, and a personally conducted tour through the fortifications under the guidance of Major Henry C. Davis, who, with his aides, has so often made it pleasant for the members of the Rubber Club. From Fort Andrews the picnickers proceeded in the same steamer to Point Shirley Club, and after dinner in the same boat back to Boston.

ON THE "WINTHROP."

The New England Rubber Club, being somewhat exclusive, had the whole boat, with the Lynn Cadet Band, and incidentally a mighty good luncheon and a sufficiency of apollinaris and ginger ale. By the time the luncheon was finished they were at the pier at Fort Andrews, where they formed in line with Major Davis, Captain Matthews, Captain Long, Captain Lomas, Lieutenant Taylor, Lieutenant Bartlett, and Post Surgeon Peck in the lead and to the inspiring music of the band marched to the ball ground, where the two ball nines, the "Importers" and the "Manufacturers," again fought for supremacy. The game was remarkable in a great many respects and was umpired by the Hon. John N. Cole, speaker of the Massachusetts house of representatives, who, being a strict parliamentarian, and a forceful character, somewhat like the late "Tom" Reed, ruled the warring parties with a gavel of iron.

POINT SHIRLEY CLUB.

Everybody in New England knows what a fish dinner is. Some know what a good fish dinner is and there are only two places in the United States where they are really good; one is at

Point Shirley. Since all long about fish dinners, there is no use printing the menu.

At the close of the dinner, President Arthur W. Stedman called upon Mr. William J. Kelly, he of the rare good nature and the big voice, to distribute the golf prizes, and "our Kelly" had his hands full for this reason: The present dining room—there will be a better one next year—is a reconstructed bowling alley and no one but "Stentor" himself could have sent his voice to the farthest diners. Kelly managed to get his two-thirds of the way down the room, and the fun he made with his jolly comments on the prizes and prize winners was fully appreciated. The prizes were as follows:

For the best gross score, Wallace G. Page, of the Hood Rubber Co., a handsome briarwood pipe.

Second best gross score, Fred. C. Hood, of the Hood Rubber Co., a fine imported traveling clock.

For the best net score, Wilber E. Farrington, silver match safe.

Second best net score, Fred. H. Jones, of the Tyer Rubber Co., an elegant corkscrew.

President Stedman, who since his illness has taken up golf enthusiastically, and who made the largest score of any of the players, is to receive a special appreciative prize later.

Although no set speeches were planned, the presence of the Hon. John N. Cole, who is one of the cleverest after dinner speakers in Massachusetts, was too good an opportunity to be lost, and he was called to his feet and made a rattling good speech. He first told one or two humorous anecdotes and told them inimitably; then when he had secured the attention of the diners—not an easy task at one of these outings—he spoke briefly and forcefully on the value and effectiveness of commercial clubs just like the New England Rubber Club. His eloquent periods were appreciated and greeted with long continued applause.

Major Davis next spoke briefly and modestly on the regular army and its work and gave every one present a warm invitation to come and see the officers at Fort Andrews whenever they would.

REWARDS OF MERIT.

President Stedman explained that certain rewards of merit were to be presented by the Hon. L. D. Apsley, who was unavoidably absent, and it therefore devolved upon the vice president of the club to explain and present them. Before their presentation, however, he said:

"First, I would like to present the premier reward personally. So that you may understand the significance of this presentation, I would like to call your attention to the record of one of our members in the service of our great government. He not only served his country diligently and well in the halls of Congress, but he has been and is a potent factor in electing the best men for the highest places in the gift of the people. He is now again hard at work using his power and influence in the election of a fitting candidate for the next presidential chair. The committee have thought it a fitting testimonial of their appreciation of his work and of their affection for the man himself, to present him with a suitable decoration, which he is expected to wear until next November."

He then held aloft a three-foot campaign button intended for the Hon. L. D. Apsley, who being absent was represented by Mr. Fred T. Ryder and who promised faithfully to deliver it to his chief. The button, by the way, was inscribed, "Vote for W. J. Bryan" and to one who has such an international reputation as a loyal aggressive Republican it undoubtedly came as very much of a surprise.

The Vice President then read as follows:

"As a preliminary to the giving of rewards of merit, members of the executive committee, with their usual care and forethought, went over the entire list of members of the New England Rubber Club and discovered a large number, who during the past year, by virtuous living, strict attention to business and abstemious conduct, deserve practical appreciation.

"The president and vice president made very strong bids for prizes, claiming all sorts of good deeds performed, but were put on probation for another year. Of the list of members who have distinguished themselves by their virtuous lives, kind acts, and deeds of valor, a number were selected by lot, as the treasurer refused to furnish funds for more than that number of prizes. They are as follows:

"George Edwin Alden, who distinguished himself as a special policeman in the town of Wellesley, and thereby has been enabled to run his automobile fifty miles per hour and claim he was trying to arrest a transgressor. (A toy police helmet and a huge policeman's club.)

"George S. Andrus, who brought from the middle West one of the largest appendixes ever known and in which he had just pride, only to have it taken away from him shortly after his arrival in Hudson—to him is returned the member of which he was so suddenly deprived. (Given a crooked necked squash.)

"It is known to all that Mr. Francis H. Appleton has reclaimed hundreds from the sober paths of Masonry and turned them into Shriners, in which body he is a particular shining light. To him is donated this beautiful golden Shriner's badge, as a token of our appreciation of his unequalled capacity for camel's milk. (A tin scimitar and crescent, about 20 inches across.)

"Charles H. Arnold, financier, rubber importer and farmer, mostly the latter, is hereby presented with a load of hay. The season has been dry—so is Arnold. (A toy cart loaded with excelsior.)

"Charles J. Bailey—he of the 'Won't Slip' tire, hard rubber tooth brushes, daily exerciser for weak and feeble youth, the 'Won't Wear' rubber shoes, and perennial good nature—is presented with a real complexion brush. (A curry comb.)

"The secretary of the club, Mr. Rice, good natured, hustling, and always late at executive committee meetings, is presented with an early morning soother for his infant son so that 'Bobbie' will have no further excuses for tardiness. (A rubber 'infant's delight'.)

"The editor of the rubber department of the *Boot and Shoe Recorder*, Putnam of the three initials, is asked to accept this beautiful fountain pen as a slight token of our affection, and our desire for further and more copious trade notes. We are sure that with this 'O-pen Sesame' he will be a 'World beater.' (Gigantic fountain pen, nearly 4 feet long.)

"That the ex treasurer, Mr. George P. Whitmore, may be able

to appreciate the contented look upon his own face when smoking his usual 'Porto-Rican,' the following replica of innate good nature, is presented: (A huge smiling plaster face from between the lips of which projected a large cigar.)

"How much the rubber trade have to thank the head of the Revere Rubber Co. for his constant and quiet helpfulness, no man can estimate. He never talks much, but always does the right thing. The committee, therefore, take great pride in presenting him with what they conceive to be one of his great inventions, a lasting boon to humanity, a package of 'Dr. Williams's Pink Pills for Pale People.'

"The president of the Tyer Rubber Co. has made an international reputation for long drives, particularly in golf; that he may make still longer drives, of which the committee is assured, they take pleasure in presenting him with a special importation from England—the 'Hercules' driver, and 'Goliath' golf ball. (An exaggerated driver and monster golf ball.)

"All things and all men are known in degrees. Some are 'first' and some are 'seconds.' Now it is a well known fact that no manufacturer ever makes 'seconds,' but in order to how to the demands of the customers, 'punched' goods have been created. Some people sell 'firsts' and some sell 'seconds.' 'Seconds' in rubber footwear are known as 'punched' goods. That one of our members has waxed fat and prosperous on the sale of punched goods, with a modicum of punch on the side, is a certified fact. The committee testifies to its appreciation of him and his success, by presenting him with this beautiful punch. (It went to George H. Mayo.)

"Mr. Taft (not our Ben, but the Republican nominee) has said that 'No gentleman weighs over 300 pounds,' which, coming to the ears of one of the club's heavyweights, resulted in much mortifying of the flesh, a great reduction in weight, and the resultant sylph-like figure which you all now have the opportunity to admire. As an earnest of our desire to be sincerely helpful, we lovingly present him herewith a pair of waist reducers. (To B. F. Taft.)

"New brooms sweep clean. To Habich, the newest of the Boston brooms in the crude rubber line, we tender this reward of merit. (A broom.)

"The Vocometer is a machine which registers not alone the speed at which a person talks, but also the number of words passing through the lips during the course of the day's conversation. The holder of the record as measured by this instrument of precision is a member of our club, but it was not until several instruments had been broken and new and stronger parts supplied, that the record was obtained. The record is 250 words per minute, or an aggregate of 150,000 words for a day of ten hours. We have not been able to induce any member of his family to give the record for the rest of the 24 hours, but they do say he is equally gifted in talking in his sleep. We present him with the most recent instrument. (To Willer E. Farrington.)"

The rewards were received with applause and occasioned very much amusement. All the recipients announced their intention of preserving them as mementos of one of the best outings that the New England Rubber Club has ever had.

At the close of the dinner the feasters took the boat for Boston, arriving about 10 o'clock, after a long day of fun, social intercourse, good cheer, and a renewal of old friendships and the forming of many new ones.

THE Continental Caoutchoucun Guttapercha Compagnie, of Hanover, report a larger turnover during 1907 than in former years. The net profit amounted to 2,942,972 marks [= \$700,429.34], against 2,741,455 marks in 1906. The dividend, 40 per cent., amounts to 2,400,000 marks. A dividend of 15 per cent, is spoken of for the English branch, the Continental Tyre and Rubber Co. (Great Britain) Limited.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

THE general unfinished state of this imposing exhibition called forth considerable comment on the opening day, and there still remained a good deal to be done when I visited it in the middle of June. From the strict point of view of THE INDIA RUBBER WORLD there is little in the exhibits to write about, though it is more than probable that goods connected with the rubber trade escaped my notice owing to the great extent of the exhibition. According to the plan of the buildings and grounds with which I armed myself, Messrs. E. Reddaway & Co., Ltd., Manchester, have a special pavilion in a prominent situation, but I found it to be only in course of erection. Presumably, before these lines are printed, the public will have had an opportunity of inspecting the wares of the firm under more attractive conditions. There is a good exhibit of the Kempshall motor tire, which has already had special mention in these notes. In the Canadian pavilion, the Canadian Rubber Co. of Montreal have a large show case of their manufactures, rubber boots and shoes being prominent.

MR. FRANCIS HOLLOWAY, who has had such a wide experience of rubber planting in Ceylon, and has been for some years manager of the Kepitigalla Rubber Estates, Limited, has recently resigned this position and is at present taking an extended holiday in England. Though Mr. Holloway's interests have centered in Ceylon, it is his opinion that as regards soil and configuration of country, the companies in the Straits have a decided advantage over those in Ceylon, though this is offset to some extent by scarcity of labor and lack of transport facilities in many districts on the peninsula. Like other men in his position I have spoken to, he does not consider a continuance of high prices for rubber at all necessary for the well-being of rubber culture; prices such as ruled six months ago returning good profits to sound concerns, while checking the flotation of dubious properties. Mr. Holloway expresses surprise at the comparatively small number of individuals who are shareholders in rubber planting companies, the large capital now involved being in far fewer hands than is the case with other industrial enterprises.

WITH regard to complaints received by rubber manufacturers from purchasers of rubber goods, the rubber covered roller has been rather prominent, and there is a disposition among the makers to put things on a more satisfactory footing. In the majority of cases the roller is put to work under conditions of which the manufacturer knows nothing, and when it is returned to him with a crack or some other defect it is not surprising that he is suspicious as to the treatment it has undergone. These rollers are used in dye works, bleach works, paper mills, and so on, though owing to their price they still find a formidable competitor in the less effective wooden roller. The rubber, which in its nature closely approximates to vulcanite, is affixed to the iron bowl by the rubber manufacturer, though the bowl is nearly always the property of the textile works. Of the firms who make a specialty of covering these bowls the North British Rubber Co. and the Irwell and Eastern Rubber Co. may be mentioned, though of course, the business is not confined to them. In some cases where the bowl has proved unsatisfactory, it is probable that it was either too hard or too soft for its particular use. As the makers have two or three special mixings, the customer would be more likely to have his requirements satisfied if he notified the manufacturer of the purpose for which the roller was required, when a suitable rubber mixing would be used. As it is, the secrecy which is often maintained in this respect frequently acts to the detriment of the maker. It has been

customary for manufacturers and middlemen to give a guarantee for certain time with the roller, but from what I have heard there is a strong disposition to alter this course of procedure as being altogether too much on the side of the purchaser. With regard to this matter I note that the committee of the India-Rubber Manufacturers' Association put forth a recommendation that no manufacturer should take any responsibility in connection with a rubber covered roller which has been turned down after it has left his possession. I know nothing of the causes which prompted this proposal, or as to its ultimate fate, but it is evident that the present position of affairs between buyer and seller is not considered satisfactory by the latter.

I NOTE that symmetrical dichlor-ethylene has recently been patented by Emil Fischer, of Berlin, as a solvent for making rubber solutions. It is said to be a much better solvent than those ordinarily employed and to be free from the objectionable qualities such as inflammability, toxic effects, etc., which characterize benzene, carbon bisulphide and chloroform. The patentee is an eminent scientist, having long been professor of chemistry at the University of Berlin, and the wording of the patent specification strikes me as more suitable to a scientific memoir than as of practical importance to the rubber trade. It may well be that this new solvent makes a better 3% solution of rubber than chloroform or carbon tetrachloride do, but then what is the commercial application of such a solution? As far as the rubber manufacture is concerned carbon bisulphide and chloroform have no application in making solutions on the large scale, their use being limited to cements for special purposes. Certainly after years of waiting, carbon tetrachloride is now on the market at a price which allows of its employment on the large scale as a solvent, though I am not in possession of any facts as to whether it has given all around satisfaction to those who have tried it on the large scale. So far I have not heard anything as to the price of dichlor-ethylene, but I imagine that it has not yet been prepared on more than a laboratory scale. The hydrocarbon ethylene is capable of producing a wide range of compounds, into the chemistry of which I do not propose to enter here. I note that a maker of uncommon chemical products quotes ethylene dichloride at about 7 pence per ounce, though this may not be the body we are discussing. It seems to me that if the new solvent is all that is claimed for it, it may be utilized instead of carbon bisulphide for certain purposes. Rubber cement made with this objectionable solvent is used on the small scale for certain purposes by large manufacturers who would not object to paying a higher price for a solvent with less associated risk and which would do away with governmental and insurance office inspections. Dichlor-ethylene has a density of 1.269, closely approximating to carbon bisulphide, which is 1.272, while the respective boiling points are 55°C. and 43°C.

A LECTURE delivered recently before the American Society of Mechanical Engineers by Mr. C. Kemble Baldwin will no doubt prove of much interest to the British rubber manufacturer. On more than one occasion I have referred to the apathy displayed by British rubber manufacturers toward the special rubber requirements of mining engineers or companies, this branch of the trade having had special attention paid to it by American firms. The paper referred to above consisted in the main of a eulogism on the Robins belt conveyor, an article which I have frequently heard highly spoken of in mining circles. Mr. Robins, I believe, went through a good deal of experimental work before he produced a belt, the rubber surface of which would successfully withstand the abrasion of the ore which it was destined

THE FRANCO-BRITISH EXHIBITION.

RUBBER PLANTING.

RUBBER COVERED ROLLERS.

NEW RUBBER SOLVENT.

THE BELT CONVEYOR.

to convey. The mechanical tests adopted for testing the qualities of different rubber mixings, tests such as exposure to a powerful sand blast and to streams of falling ore, certainly seem to have been conceived in a right spirit as having a direct connection with practice. Although the author gives a summarized account of the manufacture of such belting suitable to the uninformed engineer, he does not give away anything on which the rubber manufacturer might seize as a material guide to successful emulation. There should not, however, be any lions in the path of those who are desirous of competing with the Robins belt. Mr. Baldwin refers to the harm that has been done to the belt industry by the mining men having only a limited knowledge of rubber, but surely blame is equally to be laid at the door of the rubber manufacturer who makes belts for mining purposes of which he is totally ignorant, and who does not take the trouble of dispelling any of this ignorance by consultation with a mining expert. Mr. Baldwin is evidently of much the same mind as myself, as he advises the purchase of belts only from specialists who know the conditions of their use and can be held responsible. I am not quite sure that rubber manufacturers generally will care to give a guarantee for conveyor belts; anyhow, it would require careful consideration because what might last a long time with amorphous material could not be expected to do as well with crystalline rocks or angular ore particles.

AMONG the portraits from his Majesty downward, which are to be seen this year at the Royal Academy exhibition, in London, is a good one bearing the inscription "Presented to John Sykes, Esq., J. P., by shareholders of the English Card Clothing Co., Limited, in recognition of his ten years' chairmanship." That at least is the substance of the inscription, as far as I remember it. Mr. Sykes, though also concerned with cotton spinning, was the moving spirit in connection with the formation of the above company, and is well known in England and America in the advocacy of its interests. A Liberal Unionist in politics, Mr. Sykes is strongly opposed to the tariff reform proposals now so much in evidence, and is always ready to back up his dislike of these proposals by facts and figures from the cotton trade, with the details of which he is so much at home.

PERSONAL.

AN ENGLISH RUBBER FRAUD.

THE high esteem in which rubber investments are held in Great Britain is indicated by the ease with which frauds of the baldest character have been perpetrated in the name of rubber. Recent proceedings in the London bankruptcy court, in respect of "The Brazilian Rubber Plantations and Estates, Limited," recall the prospectus of that company, issued in February, 1906, in connection with half page newspaper advertisements inviting the public to buy its shares. This prospectus was drawn up in the most approved form, starting with a list of directors headed by

Sir ARTHUR PERCY FITZGERALD AYLMER, Bart., Donadea Lodge, Westend, Hants.

The capital was £180,000 [= \$875,070]; there were to be no debentures; the plan was to consolidate four estates in the state of Ceará, Brazil, near the seaport of Fortaleza, on which had been "systematically and scientifically planted" about 400,000 trees of the *Hevia Brasiliensis* and *Manihot Glaziovii* species, said then to be ready for tapping, and estimated to yield 450,000 pounds of rubber the first year, giving a profit of £67,500, besides the returns from coffee and sugar cane, already productive. The area was stated to be "approximately 12,500 acres." All of which was very alluring, though on looking back to the prospectus one may note that nowhere in the document is a statement made in such terms as to be capable of verification.

It transpired in the bankruptcy proceedings—for everything turned out wrong, and there was a general rumpus, and a motion to go into liquidation—that the history of the company developed in these stages:

(1) An option was given for the purchase of certain properties for £15,000, to persons who gave

(2) An option for their purchase at £20,000 to parties who turned it over to

(3) The Estates and Industrial Syndicate, Limited, of London, for the stated purchase price of £50,000 in cash and shares. The final step was the sale, by the syndicate, to

(4) The Brazilian Rubber Plantations and Estates, Limited—formed January 31, 1906—who were to pay £150,000 (where the public supplied the funds).

These transactions followed close one upon the other, and involved the handling of very little money. A witness who was identified with every step in the transactions testified that upon the organization of the final company, when some cash was actually essential, he borrowed £1,500 upon an engagement to pay £1,000 for its use for five or six days.

"Why did you borrow at that high rate?" he was asked in court.

"Because I was a fool." [Renewed laughter.]

The deal was facilitated by favorable reports made by Mr. Knevet Meiter, who testified in the bankruptcy court that he had never seen the Ceará estates, or been within 500 miles of them; he did not know one rubber species from another; he had been paid £50 for writing one report, without knowing what it was for, and had signed another which was handed to him, without his having helped to draw it up. There were mistakes in the reports, he had learned. A letter had mentioned twenty "mules" on the property, which had been read twenty "miles," and translated into 12,500 English acres, whereas the area was found later to be only 2,700 acres. Other witnesses testified that the promises of the prospectus were not realized, with respect either to the rubber trees or the buildings and other improvements on the estate.

As to the baronet on the board, one of the promoters, a Mr. Harbord, testified to paying £50 in cash and £500 in shares to secure his introduction as a director. Sir Arthur Aylmer himself gave evidence. He had never been on a board of directors before and he had no knowledge of rubber estates. He had been present at some of the meetings, but had no clear recollection of what took place. The record concludes:

The Official Receiver.—You simply did as you were asked to do when you attended at the board meetings?

Sir Arthur Aylmer.—Certainly. [Laughter.]

Mr. Harbord (a former witness).—Do you suggest that I deceived you as to Mr. Meiter's report?

Sir Arthur.—Not that I know of. Did you deceive me?

Mr. Harbord. Certainly not. [Renewed laughter.]

A MEXICAN RUBBER YARN.

IT was at a reunion of old timers, exchanging mining experiences in Mexico, that the reporter for the *Parral Miner* picked up this story which he regarded as the best one told:

"Did I ever tell you of the rubber mine I discovered on the isthmus?" asked the man from the hot country, a tall, slim, tanned man with a cigarette in his mouth. "Well, this mine I discovered by accident. I was riding along an arroyo one day, when I noticed an outcrop of a peculiar looking mineral, which on closer inspection proved to be a vein of pure rubber. I commenced to count my money right away and thought I would just load up some of my pack mules with some of the bonanza, but couldn't figure how to mine the bloomin' thing, then I thought of hitching a team of my mules to it and pulling it out. Well, that was a fair idea, but it wouldn't work; the mules pulled and tugged along till they got a good piece of the rubber out of the ground. Then they stopped for a breathing spell; they sort of lost their hold in the rocks and the rubber slammed them back against the rocks and crippled them for life. I still know where this is and am willing to show it to any of you for the price of a drink."

The Anatomical Structure of Guayule.

By Alfred Dommikus, Düsseldorf.

DURING a sojourn in Mexico, Dr. H. Ross, the custodian of the botanical museum at Munich, investigated the phytonomy* of the guayule plant (*Parthenium argentatum*, A. Gray), after having previously used the dried specimens in the botanical collection at Munich for preliminary investigations. The results of the researches made by this learned naturalist, as published in the *Berichte der Deutschen Botanischen Gesellschaft* (Reports of the German Botanical Society), with instructive illustrations, are well deserving of commendation.

The features which appear of foremost interest to us are firstly, the secretion, and, secondly, the cells of the parenchyma (the fundamental cellular tissues), inasmuch as the latter contain the rubber substance.

The secretion vessels may be divided into primary and secondary. The primary resin ducts, which are developed in the immediate vicinity of the points of growth, are formed by schizogenesis—i. e., by fission of the cell rows. They are found in the sprout axis, in the primary bark, and in the pith, and appear to be closely connected with the vascular bundles, as regards their distribution. Their number ranges between 12 and 25. Their cross section is at first approximately circular, but will finally show a perceptible elongation in a tangential direction. In stalks of 2 to 3 millimeters diameter, the average measurements of these ducts are 0.1 x 0.3 millimeter. They are less numerous in the pith, in which they retain their circular cross section throughout, until they disappear with the withering of the pith. The upper and under sides of the thick nerves or veins of the leaves and leaf stems are each provided with one secretion vessel, while the thin veins or nerves are generally devoid of secretion vessels, or else only one is found on the side of the "wood part." The primary root bark contains a few ducts, whose cross section is usually greatly elongated.

The secondary resin ducts, which are likewise formed by schizogenesis, originate in the layers of the leptome (bark), enclosed by delicate walls. Since they never extend to the parenchyma strips, and are, consequently, enclosed between the same, they are generally smaller in width, but never wider than the adjacent parts of the leptome. Their further development in the inner bark is repeated, separately for each zone or belt and at regular intervals, according to the growth of the plant in thickness. Usually only a small strip of leptome remains wholly intact at each new development, inasmuch as its place is taken up by the secondary secretion ducts. The latter are divided by the newly formed parenchyma strips, their cross section thus, of course, becoming continually shorter (0.04 to 0.05 millimeter), which makes them all the more numerous. The cells which line the resin ducts abound in protoplasm, and they may be discovered in advance, since zinc chlorid-iodine gives a yellowish color to their contents, while the same reagent colors the cells of the surrounding tissues blue, inasmuch as they contain starch.

The secretion from the cells which surround the ducts is in the form of an essential oil which, however, soon becomes resinous and appears in the form of colorless or slightly yellowish drops or aggregations. It is wholly soluble in alcohol, ether, chloroform, toluol, and xylol. Alcanin will color it red, and zinc chlorid-iodine, iodine or a mixture of iodine and sulphuric acid will impart a light yellowish color to the substance.

The substance which supplies the rubber is contained in the pith, in the strips of parenchyma, the wood parenchyma, and the primary bark, and consequently in nearly all the cells of the fundamental tissue. Ross observed the following reactions: One per cent. osmic acid imparts a dark brown or black color to the

contents of the cells in question. Zinc chlorid-iodine colors them light brown, while alcanin makes them intensely red. They are not soluble either in cold or boiling alcohol, in ether or in chloroform, even if they are left for hours immersed in either of the said fluids. They do not disappear from the cells, if treated with concentrated potassium lye, either hot or boiling, not even if they are subsequently boiled in alcohol. A mixture of chloral hydrate (5 parts) and water (2 parts) produces a very considerable change in the contents of the cells, causing a part of the same to disappear. When immersed in a mixture of potassium lye and alcohol, the contents will form spherical masses inside and outside the cells. The beautiful wine red color imparted to the contents of the cells by treatment with a concentrated solution of sugar in sulphuric acid, indicates the presence of aluminous compounds.

The bark contains a considerably larger amount of rubber than the wood itself, the only parts of the latter containing rubber being the parenchyma strips and the only slightly developed wood parenchyma. In consequence of the withering of the pith and of its resin ducts, the rubber obtained from comparatively old wood contains, however, considerably less resin. The wood parts of the root would presumably supply a product entirely free from resin. The leaves contain either only small amounts of substances resembling rubber, or none at all. Only a small amount of rubber is accumulated in comparatively young plants, and the amount increases only very gradually. It would, therefore, not pay to utilize the plants before they are ten years old.

Similar plants investigated by Dr. Ross were the *Parthenium tomentosum*, D. C., and *Parthenium incanum*, H. B. K., the secretion ducts of which, containing resin, resemble those of the *Parthenium argentatum* in both structure and arrangement. The bark and parenchyma strips of the oldest part of a blossoming branch were found to contain a considerable amount of substances whose microchemical reaction was similar to that of the rubber substances contained in the guayule.

THE LARGE PRODUCTION OF GUAYULE.

IN reporting on the condition of the guayule rubber trade, the *Mexican Herald* of recent date said: "At present the prices of guayule have suffered in common with other products, but the factories are working incessantly in the production of the gum, which finds a good market in the United States for such quantities as may be produced in Mexico under the present facilities. There are many guayule factories and all are said to be working up to the limit."

The same article says that practically four-fifths of the whole guayule production goes to the United States and the remainder to Europe, mainly to Germany. It is suggested that the German manufacturers are showing an increased interest in this material, and that should they become more liberal buyers it may have the effect of sending up prices.

The *Herald's* statements are borne out by the statistics of Mexican exports. Whereas the total exports of rubber from that country during the ten years 1889 to 1898 inclusive averaged less than 200,000 pounds a year, they amounted during the fiscal year ended June 30, 1907, to 10,321,247 pounds, and for the first ten months of the last fiscal year to a still larger total—10,106,100 pounds. In other words, the increase has been from about 88 tons a year to the rate of 5500 tons a year. And the increase has been due chiefly to the development of guayule rubber.

The comparative statement which follows, of the imports of Mexican rubber by the United States and Germany for the first

*Vegetable anatomy.

5 months of several years past, is derived from official publications of the two countries:

	America.	Germany.
January-May, 1905 pounds	173,345	(a)
January-May, 1906	1,050,595	133,320
January-May, 1907	3,939,838	1,002,320
January-May, 1908	3,804,041	1,085,040
{a—Not reported }		

The large figures given above would seem to justify the predictions to be heard on every hand that the production of guayule cannot last for many years, since the limits of supply have been pretty well outlined.

INSULATED WIRE SATURATING TANKS.

COMING in daily touch with the conditions and methods adopted by numerous wire manufacturers in the application of wax to the braid of an insulated wire, we have noticed that a great many troubles are traceable directly to the saturating tank.

The heavy first cost of building a saturating tank out of boiler plate, coupled with the danger of explosion due to getting the steam to too high a pressure in the steam chest used in this style of construction, forced us to the conclusion that although it was, theoretically, the ideal way to build, in actual practice it had its faults. Then again, when a tank built with steam pipes is located inside the vessel proper, although overcoming explosion trouble, it is next to impossible to remove the sediment which is bound to settle and burn to the tops of the steam pipes. After several months' use, this last acts like an asbestos covering, preventing the heat from freely radiating into the wax, and resulting in the compound taking twice as long in heating up in the morning, so that the first coil saturated in a run frequently shows that the braid has not been thoroughly penetrated.

To keep this tank in condition is both annoying and costly, necessitating the taking apart, removal, and burning of the steam pipes whenever the sediment, burned to the outer surface of the pipes, forms a crust, preventing the heat from freely penetrating the wax. The annoyance of this last is known to the sorrow of many manufacturers, especially those who have made wire for the government under specifications calling for a certain percentage of sea sand to be incorporated into the wax covering. The non removable type of drum around which the wire is wound and then revolved in the molten wax has many objections, the chief of which is that, the drum being entirely immersed, workmen oftentimes get badly burned repairing a wire that has broken in the process.

Having the above in mind, the writer has designed tanks involving details as follows: Some of the ideas, of course, have been incorporated successfully in the construction of tanks for years, but there may be enough that is new here to prove of interest. In designing, we had in view a tank so constructed that it would heat the waxes quickly and evenly, permit of maximum speed in application, be safe in operation, make it possible at all times to get at the wire in case of a break in the hot wax, give results that are uniform under all conditions, permit of easy, effective, and economical scraping to remove any sediment that may form on the tank's sides and bottom, and at the same time be inexpensive to construct and low in cost of maintenance.

A wooden chest is first built—oak preferably, and the sides, ends, and bottom lined with a double thickness of asbestos felt. Around the sides of the chest proper 1½-inch steam pipes are encircled. These are supported on angle iron frames so placed that there is at least an inch of space from the inner surface of the asbestos felt. The arrangement of the pipes is such as to permit the attachment of automatic steam traps to free the pipes of condensation. An inner tank is then built of sheet iron, made lap seamed and riveted so that it is fluid-tight of a size that will set into the space and rest on the steam pipes side and bottom.

The upper edge is flanged sufficient to allow it to be securely fastened to outer wooden one. In doing this the space occupied

by the steam pipes is sealed, making practically a dead air space backing.

Two general types to accomplish these results are possible—*i. e.*, those having but one reel over which the wire passes, and those with two. The special advantage of the single reel is that it occupies little room, as in this method of construction the box proper is generally made only large enough to permit of easy working of the reel in the wax. Treating as it does but one wire at a time, the time lost in repairing a broken wire is reduced to a minimum. The circumference of the single reel being larger than in the double reel construction, there is less liability of injuring the insulation of the braid, caused sometimes by bending a heavy gage wire around the circumference of a small drum.

In the double reel construction the outside dimensions of the tank are usually much longer and narrower than when one reel is used. The cubic space inside this style tank being large, it permits the adding of unmelted wax in cakes as required without affecting the temperature of the molten wax. It being possible to treat as many as a dozen wires or more at a time in tanks of this construction, it is possible to give the wire a larger time in the wax than in the single reel construction, and still have the daily output more than by other arrangement. This insures thorough saturating, a very important feature when the life of both braid and rubber insulation is considered.

It is readily seen by this rough description that tanks so constructed are very inexpensive, and that practically all the heat generated in the steam pipes is imparted to the wax. Owing to the dead air space obtained by using the asbestos felt, and the fact that the sheet iron is of thin gage, the heat is not retarded as it is in passing through the thick boiler plate necessary in the steam chest construction. The sides of the tank being smooth, it is an easy matter to scrape and clean. The face of the reel should be slatted to allow free circulation of melted wax around the wire during treatment. The reel itself should revolve on a shaft which is fastened at either end to two flat iron supports, which last are suspended from either side of the tank. One of these supports should have attached a handle of sufficient length and strength to permit of turning the reel upside down out of the wax to enable getting at the wire to repair in case of break.

W. C. COLEMAN.

PROGRESS OF WIRELESS TELEGRAPHY.

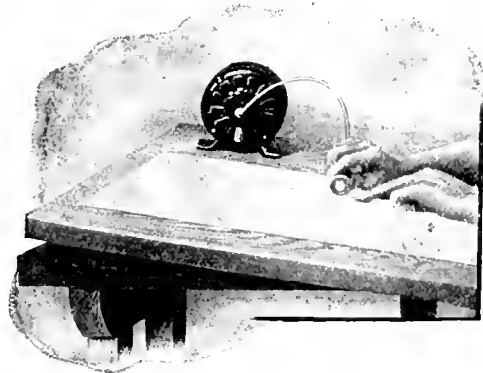
MARCONI'S Wireless Telegraph Co., Limited, during June offered for public subscription £250,000 in additional shares, the proceeds to be used in establishing a service between Poldhu and the United States, to supplement their present transatlantic service between Galway and Canada. The authorized capital of the company is £750,000 [= \$3,649,875], and the previous issue of shares amounted to £394,197. The company states that it has large holdings in several affiliated companies, besides owning over 400 wireless telegraphy patents and a factory for producing the apparatus used in the Marconi wireless system, all of which constitute a source of revenue in addition to that of the direct operations of the company first named. Concerning the affiliated Marconi International Marine Communication Co., Limited, the following figures are given, in respect of its maritime business: Number of ships (other than warships) using the Marconi system, 118; number of words transmitted in 1907, 1,834,540; net receipts from this source, £37,506 6s. 4d.

THE purchase from Bolivia of the Acre district appears to have been a profitable piece of business for Brazil. The indemnity paid, exclusive of the cost of the Madeira-Mamoré railway, now building, was £2,000,000 (£2,050,000, including bankers' commissions). Up to the end of 1907 more than this much was received by the Brazilian government in duties charged on the export of rubber from the Acre district.

New Rubber Goods in the Market.

A MOTOR DRIVEN ERASER.

IN a former issue of THE INDIA RUBBER WORLD (September 1, 1905—page 412) space was given to an improvised mechanical device for operating a rubber eraser in the case of work—such as engineering plans—on which a great deal of erasing is to be done. As indicating that a real want exists in engineering offices for something of this kind, we are able now to record that a motor driven eraser, which is here illustrated, has been placed upon the market. Draftsmen know that erasing with a very light fast motion will remove lines without a scratch, but all of them have not the patience to do this, and the result is a



COATES MOTOR DRIVEN ERASER.

marred drawing or tracing. Often it is necessary to make many corrections in a drawing, and besides being very tedious, much time is consumed. By the use of a motor connected to the eraser by a flexible shaft, the corrections can be made quickly and neatly. The motor usually is placed near the edge of the table, but may be moved from one table to another. The eraser shown in the illustration is connected to a small Westinghouse motor, fitted with Coates unit link flexible shaft. The motors are wound for either direct or alternating current. [Coates Clipper Manufacturing Co., Worcester, Massachusetts.]

THE GLASEPTIC NEBULIZER.

THE Glaseptic nebulizer, with the exception of the rubber tube and bulb, is constructed entirely of glass, and therefore can be used with every description of liquid in the treatment of nasal



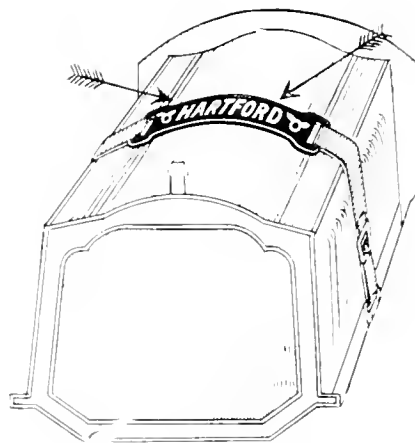
GLASEPTIC NEBULIZER.

affections or of the tharynx and larynx—with solutions of any density, whether ethereal, spirituous, oily, or aqueous; with concentrated saline solutions or with viscid preparations. The use of glass parts is intended to obviate possibility of oxidation or corrosion, and to render it easily cleaned. Of course the rubber bulb is one of the essential features of the device, for which reason space is given it in these pages. The cut shows to the left a special attachment in the shape of a throat piece. [Parke, Davis & Co., Detroit, Michigan.]

HARTFORD HOOD ANTI-RATTLER.

THE average automobile owner has noticed the rattling of the hood on his car, and while it is but a little thing and does not reflect on the construction or durability of the machine, it is nevertheless annoying to the driver to constantly hear it. To obviate this many owners have placed a strap across the top of the hood, fastening it as tightly as possible to prevent shaking.

The Hartford Hood Anti-Rattler goes a great deal further. It is a strip of flexible rubber about a foot in length, 2 1/2 inches wide and 1/4 inch thick, slotted at either end. When placed over the center of the hood, the ends of the leather straps are drawn through the openings in the rubber strip at either end, and then



HARTFORD HOOD ANTI-RATTLER.

buckled down firmly on the side of the hood. This not only holds the hood in place positively, but, on account of the elasticity of the rubber, takes up whatever vibration there may be and also deadens the noise. This article is neatly lettered with the word "Hartford" and the winged wheel trade mark of the company. It is made of good rubber dead black in color, and will not bloom with age. Patents have been applied for. [Hartford Rubber Works Co., Hartford, Connecticut.]

COVER'S RUBBER GOGGLE.

THIS article is referred to as being protected by patents which cover the whole rubber goggle, comprising the constrictively held

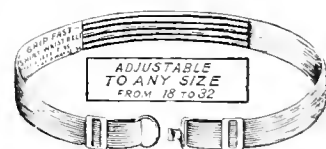


RUBBER GOGGLE FOR MOTORISTS.

lenses, the elastic tubes in the outer ends of which the lenses are supported, the flesh pads about the eyes of the inner ends of the tubes, the reinforcement at the ends of the flesh pads and between the eye tubes, and other features. These goggles are all rubber, except the glasses, and are adjustable to any face. They are dustproof, rainproof, sanitary, and neat in appearance. The most recent patent relating to this article was issued June 16, 1908. [H. S. Cover, South Bend, Indiana.]

THE "GRIP FAST" SHIRT WAIST BELT.

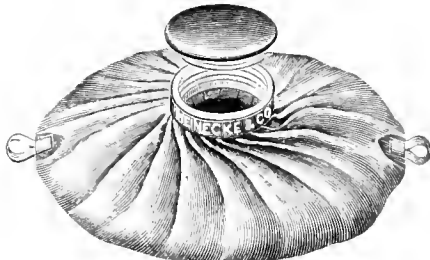
ONE of the smaller articles in the line of notions in which the use of rubber is involved, but one which has come into wide use, and with great comfort and convenience to the wearer, is the ladies shirt-waist belt illustrated in the margin. The belt is made of li-le web, adjustable in length. A distinctive feature of the article is the corrugated rubber strip in the back, which is designed to hold the shirt waist in place—and does it. The article is patented. [David Basch, No. 190 Wooster street, New York.]



"GRIP FAST" BELT.

"ELITE" SCREW CAP ICE BAG.

THE special features of this article lie in its durability and the attractiveness of the cloth inserted maroon colored stock; in the loops by which the bag may be fastened securely in place; and last, but most important, in the "unlosable washer" which completely covers the metal screw cap, fitting snugly over it, and consequently is always in place. In the 9 inch size the list price is \$18 per dozen. A patent has been applied for. [Whitall Tatum Co., No. 46 Barclay Street, New York.]



PATENT APPLIED FOR
"ELITE" SCREW CAP ICE BAG.

STANDARD EXPANSION BUCKET.

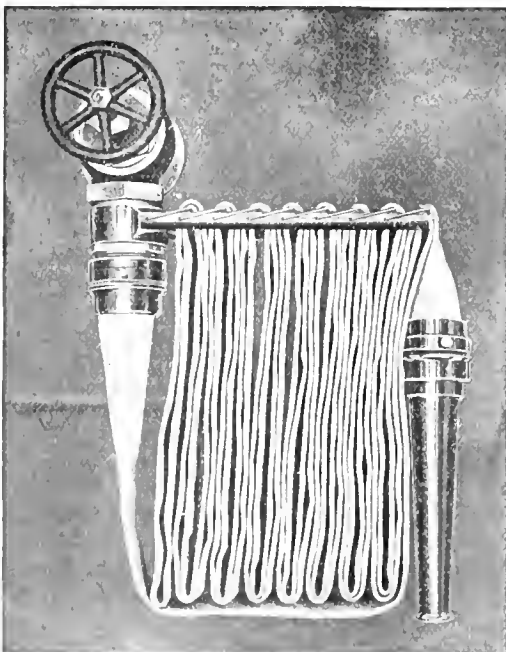
IN connection with "Cleveland" pump chain is manufactured a line of rubber pump buckets. The latest development in this line is the Standard Expansion Bucket, on which a patent has been allowed and which is shown in the illustration. This bucket has been designed to embody all the features shown in pump buckets generally, while more simple than others, and costing no more. It consists of only two pieces—the link and the rubber. The bulk of the rubber at wearing point 7-16 inch thick. Reference is made to the large, strong coarse thread on both rubber and link, making expansion quick and sure. The buckets can be expanded at any time without removing them from the chain. This bucket is furnished in all standard sizes. [The Cleveland Galvanizing Works Co., Cleveland, Ohio.]



STANDARD
EXPANSION
BUCKET.

THE "IDEAL" SWINGING HOSE RACK.

THE latest swinging hose rack to be brought out is that illustrated herewith, and which is described by the manufacturer



THE "IDEAL" SWINGING HOSE RACK.

and the "Ideal". This rack may be attached to the wall or stand on wheels as to the valve. It is made in polished brass or nickel plated brass and has a handsome appearance. It is simple

in construction and operation. Its use permits of the water being turned on before removing the hose. This rack is designed to carry linen hose only. Patents are pending. [The H. J. M. Howard Manufacturing Co., Washington, D. C.]

COX TIRE REPAIR KIT.

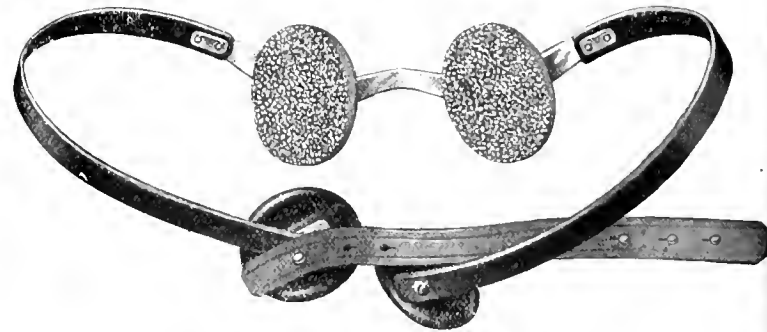
THE Cox specialties for use in tire repair work are supplied in a kit, the appearance of which is suggested by the illustration. Each kit is supposed to hold enough solution for the repair of 40 punctures. When a repair is to be made, the idea is to remove all dirt from the tire with gasoline; then roughen the surface with sandpaper or file, and apply a coat of cement, allowing it to dry ten minutes, after which a second coat is applied and allowed to dry. The whole is moistened with acid and clamped into a Cox "vulcanizer," so constructed with the help of a felt cushion, as to conform to the shape of the patch. The repair is due to chemical action alone, and no heat is required. [David H. Cox, Rahway, New Jersey.]



COX TIRE REPAIR KIT.

SPONGE RUBBER TRUSS PADS.

A NEW feature in the construction of truss pads is in making them of sponge rubber. Pads of this character are soft and comfortable, while yet firm and holding without slipping. The



AKRON TRUSS, WITH SPONGE RUBBER PAD.

firm introducing this new article are manufacturers of surgical trusses of many patterns, but the sponge rubber pad, as shown in the illustration, is the same as applied to all. [The Akron Truss Co., Akron, Ohio.]

WHERE TRADE CATALOGUES ARE NOT GIVEN AWAY.

IN America, where trade lists are printed in such profusion and distributed freely, no matter how elaborate or costly, it is doubtful whether many copies would be distributed by a house undertaking to make a charge for catalogues of its goods. Such is the custom, however, in some other countries. The first catalogue of a new firm in the rubber trade in Switzerland, for example, is priced on its title page at 4 francs, besides which the copies are numbered serially, and a record kept of the recipient of each copy distributed. Furthermore, each copy bears a label with the name of the firm receiving it and a statement that the book is for the exclusive use of that firm. Some of the German houses issue catalogues priced as high as 10 marks, though the custom of charging for the catalogues is not general in that country. It used to be the custom in Cuba, whether it is now or not, for firms issuing trade lists to lend them to parties expressing an interest in their business, with the idea that after use had been made of them they should be returned for other possible customers. The real paradise of trade catalogue printers is in the United States.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JUNE 2, 1908.

NO. 889,263. Pneumatic tire for vehicle wheels. R. P. Scott, Cadiz, Ohio.

889,334. Armor for tires. [Chain armor formed of a plurality of rows of links.] E. E. Remark, Akron, Ohio.

889,374. Overshoe fastener. [An eye mounted on an overshoe engages a hook secured to the shoe.] J. Hopson, Ogden, Utah.

889,376. Hollow rubber article having seams. [Method of forming hot water bottle.] J. F. Kepler, Akron, Ohio, assignor to The B. F. Goodrich Co.

889,419. Support for lawn hose. L. E. Whitney, Carthage, Mo.

889,709. Golf ball. [An expanded cone of thin elastic material is filled with an incompressible liquid.] E. H. Mungay, Berfeld, Bridge & Weir, Scotland.

889,726. Hose clamp. H. B. Sherman, Battle Creek, Mich.

889,756. Cushion. J. S. Bukacek, Riverside, Ma.

889,867. Packing. [Compressed and vulcanized mixture of fibrous asbestos with sulphur, litharge, and rubber, and provided with a protective coating of a suitable electrolytically deposited metal.] C. H. Reynolds, Rochester, N. Y.

889,810. Medicating and massaging appliance. H. Robinson, Waco, Tex.

ISSUED JUNE 9, 1908.

889,927. Automobile tire casing. [With leather strip cemented to tread and vulcanized with it.] C. L. Higgins, Montreal, Quebec.

889,919. Hose making machine. J. S. H. Lovett, Trenton, N. J., assignor of one-third each to T. P. Payne, Newark, N. J., and W. W. Neat, Toronto, Canada.

889,949. Feeding mechanism for hose making machine. *Same*.

889,972. Distributing nozzle [for garden hose]. A. Schmidt, Indianapolis, Ind.

890,216. Art of purifying rubber. [Treatment with a compound solvent comprising acetone and methyl acetate.] H. O. Chute, Cleveland, Ohio.

890,217. Art of purifying rubber. [The process producing the compound solvent mentioned in the preceding patent.] *Same*.

890,223. Spring wheel. B. F. Dillenbaugh, Creston, Iowa.

890,362. Tire protecting device. L. H. Kinnard, assignor of one-half to R. S. Chamberlin, both of Harrisburg, Pa.

890,376. Milking machine [with rubber teat cups]. A. Reid, Waipuku, New Zealand.

890,414. Hose clamp. W. Y. De Worth, Bordentown, N. J.

890,520. Rod packing. J. P. Leander, Chicago.

Trade Mark.

34,170. The Siemon Hard Rubber Corporation, Bridgeport, Conn. Three disks, and a "heart," "spade," and "club" in combination. For poker chips.

ISSUED JUNE 16, 1908.

890,624. Vehicle tire. [Solid rubber.] E. L. Easlick, Akron, Ohio, assignor to The Goodyear Tire and Rubber Co.

890,652. Hose rack. [For fire hose, indoors.] H. J. M. Howard, Washington, D. C.

890,653. Means for supporting flexible hose. [For fire hose, indoors.] *Same*.

890,671. Pneumatic wheel for vehicles. B. J. Macanley, Eastbourne, and J. A. F. Hall, Hampden Park, near Eastbourne, England.

890,681. Bed pan. M. Moore, Marble Rock, Iowa.

890,785. Protecting device for tires. G. D. Moore, Worcester, Mass.

890,885. Device for turning nursing nipples. E. L. Stuart and S. A. Conine, New Hamburg, N. Y.

890,899. Elastic means. L. A. Garchey, Paris, France.

890,904. Weather strip. P. L. Hedberg, assignor to Chicago Metal Weather Strip Co., all of Chicago.

890,920. Return ball. J. P. Newbold, Cape May, N. J.

890,975. Breast pump. J. S. Gilbert, assignor of one-fourth to M. N. Munly, both of Portland, Ore.

890,990. Syringe. [Vaginal.] A. E. Macdonald, San Francisco.

891,030. Armor for rubber tires. V. L. Beckel, Cleveland, Ohio.

891,109. Bottle stopper. E. H. Speece, Beatty, Nev.

891,172. Wheel rim. E. Hopkinson, East Orange, N. J., and T. Mideley, Hartford, Conn.; said Hopkinson assignor to The Hartford Rubber Works Co.

891,181. Inflatable bandage. P. Mitchell, Rock Island, Ill.

Trade Marks.

27,955. Hannoverische Gummi-Kamm Compagnie, A.-G., Hanover-Limmer, Germany. The word *Excelsior*, on either side of which is a figure holding a tray of combs. For rubber combs.

32,670. Standard Rubber Mfg. and Supply Co., Trenton, N. J. The word *Satory*, for printers' blankets.

32,700. The Ohio Mfg. Co., Middletown, Conn. The word *Chloris*. For dress shields.

34,495. New Orleans Roofing and Metal Works, New Orleans. The word *Nola*. For rubber roofing.

ISSUED JUNE 23, 1908.

891,384. Rubber foothold. E. A. Strang, Cleveland, Ohio.

891,498. Pneumatic tire for wheels of vehicles. [Relates to the method of retaining in the rim.] A. Michelin, Paris, France.

891,506. Cow milking machine. W. W. Sprague, Monmouth, Me.

891,533. Pneumatic knee pad. P. P. Gibbs, Cordon, Tex.

891,557. Ring of reinforced metal covers for pneumatic tires. S. A. Marazzani, Palermo, Pa.

891,578. Tire armor. H. C. Wheeler, Canandaigua, N. Y.

891,652. Weather strip. O. T. Akre, Wallingford, Iowa.

891,655. Vehicle wheel. T. A. Baker, Renick, Mo.

891,687. Vulcanizer. W. D. Gratama, Rijswijk, Netherlands.

Trade Mark.

34,289. Pennsylvania Rubber Co., Leamington, Pa. The word *Parac*. For rubber rings and gaskets for tops of jars.

ISSUED JUNE 30, 1908.

891,811. Automobile wheel. [With pneumatic tire.] K. Kohlmann and G. Andree, Daim, Wis.

891,866. Process of preparing india-rubber for vulcanization. [Consists in boiling the rubber with amyl alcohol with the simultaneous addition of water, thereby keeping down the temperature below the melting point of the rubber.] H. Scholz, assignor to B. Gratz, both of Berlin, Germany.

892,072. Horse pad lock. F. L. McGinn, assignor to The American Pad and Lock Co., all of Greenfield, Ohio.

892,075. Tire. A. O'Brien, assignor of one-half to F. P. McGinn, both of Chicago.

892,171. Rubber shoe. C. E. Mapes, New York city.

892,197. Hose clamp. H. C. Umpleby and M. J. Butler, Angelica, N. Y.

892,209. Vulcanizer. W. H. Barnard, Merchantsville, N. J.

892,291. Vehicle wheel. J. McIntyre, assignor to J. E. McIntyre, both of Boston.

892,294. Vehicle wheel. J. Nicholson, Boston.

892,321. Wheel. [A wheel within a wheel, with an intermediate elastic tire.] E. Stanchitt, New York city.

Trade Marks.

33,439. The Corbett-Taylor Co., Trenton, N. J. The word *Cortay* within a diamond shaped border. For rubber belting, packing, and hose.

34,234. Roberts, Johnson & Rand Shoe Co., St. Louis. The words *Stronger Than the Lane*. For rubber footwear.

34,815. Charles Niedner's Sons Co., Malden, Mass. The word *Senate*. For linen tire hose.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1907.

Don'tes Patents for American Intentions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, MAY 27, 1908.]

2,728 (1907). Machine for attaching rubber tread strips to pneumatic tire covers. New Eccles Rubber Works and J. George, Eccles.

2,753 (1907). Detachable rim for pneumatic tires. P. E. Doolittle, Toronto, Canada.

2,833 (1907). Sleeve of fabric for tire tubes, life belts, and air cushions. D. W. Yates and two others, Radcliffe.

*2,875 (1907). Solid rubber tires formed with radial recesses extending inwards from the tread. W. W. Ryam, Chicago, Illinois.

2,887 (1907). Spring wheel with pneumatic hub. A. F. Stevenson, St. Helens Cable and Rubber Co., Warrington.

2,950 (1907). Vehicle wheel with india-rubber blocks placed between inner and outer rims. M. Cosset, Paris, France.

2,958 (1907). Road gripping chains for pneumatic tires. F. C. Woodford, Harlesden.

2,995 (1907). Device for detecting punctures in pneumatic tires. S. T. Oldridge, London.

3,003 (1907). Detachable rim for pneumatic tires. J. Buchan, Tottenham.

3,080 (1907). Small additional wheel to prevent side slip in motor vehicles. H. H. C. Sinclair, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 3, 1908.]

3,102 (1907). Tire tread built up of alternate rubber and leather strips. R. L. Benwell, Leamington.

3,251 (1907). Mandrel or mold for vulcanizing repair tubes or covers. [Described in THE INDIA RUBBER WORLD, July 1, 1908—page 335.] W. Frost and H. Harvey Frost & Co., London.

3,258 (1907). Non-slipping cover for pneumatic tires, involving sheet metal rings. P. Schmidt and L. Schwarz, Berlin.

3,262 (1907). Solid rubber tires formed with deep transverse non-radial grooves. E. L. H. Cosby, London.

3,292 (1907). Tire inflating pump. A. Linard, Victoria, Australia.

*3,391 (1907). Sponge rubber pad for surgical trusses. [Described on another page of this journal.] E. R. Bathrick, Akron, Ohio.

3,495 (1907). Solid rubber tire having a tread provided with conical holes. J. Morris, London.

3,480 (1907). India-rubber substitute. [In the production of an elastic composition by the action of formaldehyde upon gelatin, a primary aromatic amine, such as aniline, in emulsion with the gelatin solution, is employed. An oil, such as castor oil, terpineol, or eucalyptus oil, may be fixed with the aniline, while the formaldehyde may be fixed with glycerine before admixture with the other bodies.] L. Stange, Aachen, Germany.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 11, 1908.]

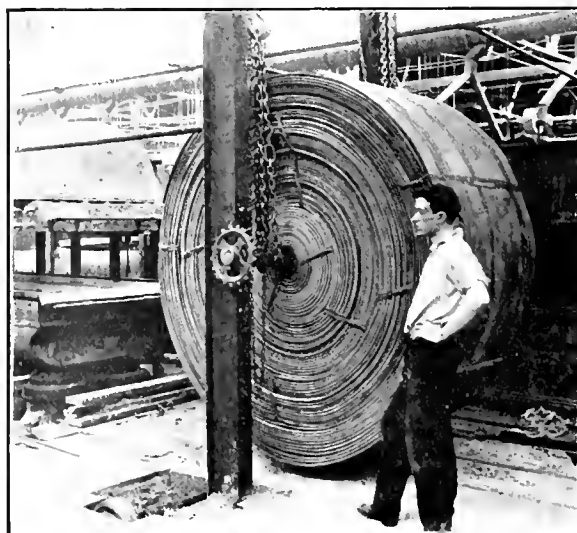
- *3,780 (1907). Safety valve for a dental vulcanizer. J. C. Pogue, Findlay, Illinois.
- *3,831 (1907). Fabric for pneumatic tires. [The cover comprises an outer rubber layer, and an inner fabric structure, formed of a number of superposed weft threads, united by warp threads, which interlace from side to side of the fabric. The material used is Japanese or other silk, or silk combined with Sea Island cotton, etc.] C. Zeelen, Chicago, Illinois.
- 3,855 (1907). Spring wheel, the tread comprising blocks of wood or compressed pulp resting upon rubber sections. E. Allan, Penarth.
- 3,867 (1907). Spring wheel having a tread in rigid segments supported by pieces of rubber with elastic cushions arranged to break joint between the segments. G. Moore, Aston, Birmingham.
- 4,003 (1907). Detachable rim for tires. M. Maunier, Toulon, France.
- 4,052 (1907). Detachable rim for tires. H. Pataud, Paris, France.
- 4,060 (1907). Securing non skid studs to the tread of pneumatic tires. L. Callender, Matlock.
- 4,084 (1907). Spring wheel, comprising inner and outer felloes separated by an elastic cushion, with an outer solid rubber tire. J. D. Macarthur, Ayr, Scotland.
- 4,221 (1907). Device to facilitate the putting on of thin rubber gloves such as surgeons use. C. A. Hoeftcke and C. A. Hoeftcke, Ltd., London.
- 4,268 (1907). Method of reclaiming rubber. P. C. H. West, London.
- 4,272 (1907). Hose coupling. E. R. J. Willis, Kingston-on-Thames. (J. Polinson, Willowbrook, Canada.)
- 4,297 (1907). Packing. A. R. Trist, St. Albans.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 17, 1908.]
- 4,337 (1907). Hoof pad. W. Cross, London, and H. G. Teagle, Harrow.
- 4,416 (1907). Tire formed of sectional blocks mounted between dovetail ribs on the rim. E. W. Coleman, Twickenham.
- 4,501 (1907). Wheel rendered resilient by an arrangement of concentric spring bands and having a rubber tread. T. G. Salisbury, Paris, France.
- 4,510 (1907). Machine for masticating crude rubber. L. Norzagaray, London.
- 4,511 (1907). Tool for tapping rubber trees. L. Norzagaray, London.
- 4,565 (1907). Pneumatic tire with double ended air tube. J. Stuart, Glasgow.
- 4,646 (1907). Design for a poncho cape for use in motoring and the like. B. F. Wood, Glasgow.
- 4,680 (1907). Elastic tire in which the inner layers are of harder material than the tread surface. A. T. Collier, St. Albans, and Reilloc Tyre Co., London.
- 4,682 (1907). Resilient shock absorbing washer for bases of machinery in general. H. Lee, London.
- *4,690 (1907). Vehicle having curved spring spokes held somewhat in compression by a metal band forming a seating for a rubber tire. A. A. Daugherty, New York.
- 4,717 (1907). Method of purifying crude rubber by treating it with solvent for the resin. A. G. Blexon, London. Raffineries Réunies de Caoutchouc, S. A., Antwerp.)
- *4,741 (1907). Tubular spring tire with studded leather tread band. R. Haddan, London. (J. K. Parker, Long Beach, California.)
- 4,746 (1907). Wheel with tread of end grain wooden blocks carried in metal frames supported upon an elastic bed. J. E. Hill, Lye, Worcestershire.
- 4,872 (1907). Layer of rubber between the inner and outer soles of boots to impart spring or elasticity. J. A. Smith, Anstey.
- [ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JUNE 24, 1908.]
- 4,917 (1907). Pneumatic tire. [The casing encloses two or more air tubes each surrounded by a tubular inextensible sheath of fabric.] O. M. Schütte, Bad Kosen, Germany.
- 4,928 (1907). Pressure cage and inflating valve for tires. J. H. Hooley, Davyhulme, Manchester.
- 4,929 (1907). Means of securing twin solid rubber tires. Société Anonyme des Etablissements Hutchinson, Paris, France.
- 4,952 (1907). Securing plate for heel pads. W. Mawlam, Stockton-on-Tees.
- 4,964 (1907). Solid rubber tire with recesses in which blocks of wood or metal are held by cross pins. A. W. Tidbury, London.
- 5,011 (1907). Rubber stamp, preferably combined with an inking pad, employed in a method of identification. E. Michaud and two others, Quebec, Canada.
- 5,188 (1907). Detachable rim for tires. R. L. Hannemann, Gelnhausen, Germany.
- 5,198 (1907). Revolving heel pad. T. Smith and W. G. S. Whyatt, London.
- 5,218 (1907). Chain device to prevent side slip of cycles and motors. H. Harris, London.
- 5,336 (1907). Valve for sectional pneumatic tires. V. F. V. Charavet, Paris, France.
- 5,374 (1907). Solid tire and special rim flanges for retaining the same. N. Macheth, St. Anne-on-the-Sea, and W. Norris, Blackpool.
- 5,476 (1907). Non skid device applicable to tire covers and boot soles. J. Gresson, Blackburn.
- 5,531 (1907). Puncture preventing band for tires arranged between the cover and air tube. J. J. Darnell, Upper Norwood.
- 5,566 (1907). Detachable tire carrying rim. W. E. Cule, Treforest, Pontypridd, and two others.

- 384,234 (Jan. 29). P. Gaymand. Multiple pneumatic tire.
- 384,301 (Nov. 23). H. J. Bastide. Rim for pneumatic tire.
- 384,340 (Jan. 31). P. Rousillon. Soft bands for pneumatic tires.
- 384,341 (Jan. 31). E. Decauville. Apparatus for repairing tire tubes.
- 384,383 (Nov. 26). Puncture Free Pneumatic Tyre Co., Ltd. Device for automatic closing of punctures in tire tubes.
- 384,408 (Nov. 26). Société "La Palladium Antiderapant Imperforable." Tire protector.
- 384,435 (Nov. 27). C. G. Lotave. Pneumatic tire.
- 384,330 (Nov. 27). J. Lemoine. Rubber armor for pneumatic tires.
- 384,594 (Dec. 2). F. F. Ruau. Elastic tire.
- 384,610 (Dec. 3). A. Soly. Joining the ends of non continuous tire inner tubes.
- 384,705 (Dec. 5). Del Hoyo y Diez. Detachable rubber pad for horses and tool for placing it in the hoofs and removing it from the same.
- 384,540 (Nov. 30). G. Wunderlich. Rubber reclaiming process.
- 384,632 (Dec. 3). W. D. Gratama. Vulcanization of india-rubber and gutta-percha.
- 384,770 (Nov. 30). L. Lesiene. Pneumatic tire protector.
- 384,830 (Dec. 9). Bragg and Brown. Pneumatic tire cover.
- 384,885 (Dec. 10). O. Eisele. Pneumatic tire.
- 385,010 (Feb. 22). B. Sauton. Process of making an elastic material analogous to caoutchouc.
- 385,107 (Dec. 18). Walker. Pneumatic tire protector.
- 385,100 (Dec. 10). F. Bouteiron and de Bougada-Vila. Process and apparatus for extracting caoutchouc.
- 385,216 (March 4). H. Harmel and C. Toussaint. Leather and rubber pneumatic tire protector.
- 385,303 (Dec. 6). O. Hansson. Vulcanization of objects in wood, papier mache, etc., enveloped in rubber.
- 385,450 (Dec. 21). H. Libs. Manufacture of a new elastic substance.
- 385,474 (Dec. 21). Umann frères. Imitation of wood by covering wooden objects with sheets of rubber.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Robet, Ingenieur-Consult, 10 avenue de Villiers, Paris, at 50 cents each, postpaid.]

THE postmaster general of Australia lately invited bids for construction and laying of two new cables between the island of Tasmania and the mainland, the bids to close on April 14. The specifications call for a total of 300 nautical miles of 7 conductor cable, with gutta-percha insulation—the total work to be completed not later than April 1, 1909.

THE report of Sir Eldon Gorst, agent and consul general of Great Britain, on the finances, administration, and condition of Egypt and the Soudan for 1907, refers to rubber production, and notes with satisfaction "that the question of starting plantations in various localities on the upper Nile is under consideration."



A LARGE RUBBER BELT.

[Made by the Republic Rubber Co., Youngstown, Ohio, for Frazer & Chalmers, London, for shipment to a mine in South Africa. Eight ply, 850 feet long, 42 inches wide, with 14 inch rubber cover on one side; weight, 14,500 pounds.]

THE FRENCH REPUBLIC.

Patents Issued (with Dates of Application).

- 384,231 (Nov. 22, 1907). Leviéze. Pneumatic tire cover.
- 384,630 (Jan. 23). Le Roy. Cold vulcanization.
- 384,108 (Jan. 25). A. Nodon. Process of extracting natural gums.
- 384,115 (Nov. 18). Cornalt and The Union Rubber and Chemical Co., Ltd. Vulcanization by electric heating.

The Late Charles H. Dale.

IN the passing away of Charles H. Dale the American rubber trade has lost one of its most notable leaders of recent years, and thousands will mourn the loss of a friend. Mr. Dale's death followed an illness of only a week, and occurred on July 18 at his summer home at Larchmont, near New York.

Mr. Dale was born in New York city in 1852 and had entered his fifty-seventh year. He was the son of a physician and attended the public schools until he was 13, when, with the idea of becoming a lawyer, he entered upon a course of study intended to fit him for this. After being graduated from the Cheshire Academy, at Cheshire, Connecticut, he caught the "railroad fever" and insisted that it was better for him to become a good railroad man than possibly an indifferent lawyer. His father was finally influenced by his persuasions, and young Dale was introduced to the notice of one of the most successful railway managers at that time. To determine how strongly the youth was resolved to engage in a railroad career, the manager in question had him put to work as a brakeman, where during the first day—or night, rather—he had an opportunity to display qualities which led to his being given every opportunity to climb upward as fast as he could. In time he became a conductor, and as such had charge of the first passenger train out of New York over the West Shore railroad, now a part of the New York Central system. He had become superintendent of transportation when his interest happened to be attracted to the subject of air brake hose.

It happened that Mr. Dale became acquainted with the management of the Peerless Rubber Manufacturing Co., with a factory at New Durham, New Jersey, and the first result was his connection with that company in the capacity of selling their goods to railway companies—a line in which he was exceedingly successful.

After having been general sales agent of the Peerless company for about five years Mr. Dale was made general manager on May 1, 1894, and a year later became president and general manager. In the autumn of 1895 the capital of the company was increased from \$75,000 to \$300,000, and on April 1, 1898, when the company was incorporated under the laws of New York, there was a further increase to \$1,000,000, fully paid. The new shares were subscribed to an important extent by persons in interest with the Westinghouse Air Brake Co. (Pittsburgh), and the company's production of railway air brake hose became very large. The company devoted attention likewise to several other

special lines of production, with such results as to place it in the foremost rank of mechanical goods factories in respect of profits. Mr. Dale, at the time of his death, had been connected with the Peerless company for nearly twenty years, and identified with its growth from a small business, in connection with all of which he became familiar with practically every feature of the business, whether manufacturing, selling, or financial management.

Mr. Dale was one of the incorporators, at the beginning of 1899, of the Rubber Goods Manufacturing Co., under the laws of New Jersey. The purpose of this company was to consolidate to an important extent the mechanical goods industry in the United States, and the Peerless Rubber Manufacturing Co. was among the companies embraced in the new organization. The several companies preserved their corporate identity, however. Mr. Dale retaining the office of president of the Peerless company and directing its policy and operations as before. He was a director of the Rubber Goods company from the beginning, and gradually joined the boards of several of the subsidiary companies. In time he assumed the presidency of all the subsidiary companies making mechanical goods, and their active management.

At the annual meeting of the Rubber Goods company in 1903 he was elected president of that corporation, at a salary much larger probably than has ever been paid to the head of any other rubber company. The office of chief executive of the company had not been filled before by a practical rubber man, and the holding of the position by a man having this advantage, in addition to being a capable organizer and



THE LATE CHARLES H. DALE

[Photo by Davis & Eickemeyer.]

administrator, was seen in the speedy improvement of the condition of the company and its constant and substantial growth. The extent of the company's business may be implied from a few figures. The original issue of capital shares was \$18,030,600, which was increased until the figure now stands at \$27,293,100. Sales during the last business year amounted to \$21,473,823.28. During nine years the amount disbursed in dividends has been \$6,491,993.92. Three years ago the Rubber Goods Manufacturing Co. was merged with the United States Rubber Co., but without losing its identity as a corporation, and Mr. Dale retained the presidency, besides becoming a director and member of the executive committee of the United States company. Following this development Mr. Dale issued a notice to the various managers under his charge which was characteristic: "The merger - - - will in no way affect the management of your companies or any

individual in them, other than to give them greater opportunities. The management will be continued under my administration in future as in the past."

An idea of the amount of detail involved in Mr. Dale's work is indicated by the fact that in addition to the positions mentioned, he was president of the New York Belting and Packing Co., Limited, and the Mechanical Rubber Co., the latter corporation comprising a half dozen concerns which formed the nucleus of the Rubber Goods Manufacturing Co. Nor were his official positions merely nominal. He instigated and planned in the larger sense the building of the great Morgan & Wright rubber factory at Detroit, Michigan; he superintended the merger with the Rubber Goods company of the tire factories acquired from the American Bicycle Co., finally reorganizing all of the latter, including the Hartford Rubber Works Co.

In addition to the business connections already noted, Mr. Dale was a director in two New York banks—the Merchants' Exchange National and the Century Bank. He was a member of the Union League Club, New York Yacht Club, Larchmont Yacht Club, the Automobile Club of America and the New York Athletic Club. Mr. Dale was prominent among New York yachtsmen and his yacht, *The Whim*, attracted no little attention. He was also a member of the Masonic fraternity. His town house was at No. 131 West One Hundred and Nineteenth street. Funeral services at the Larchmont residence on the afternoon of July 20 were attended by the executive officers of the Rubber Goods Manufacturing Co. and the directors of the United States Rubber Co. The interment, which was private, was at Woodlawn Cemetery the next forenoon. The offices and branches of the various rubber companies with which Mr. Dale was connected were closed throughout Monday and during the time of the interment Tuesday. Mr. Dale is survived by a widow and daughter.

"Charley Dale," as his friends loved to call him, was ever a most forceful character. He despised pretense and hypocrisy and bluntly made the fact known whenever those twin vices showed their heads in his presence. He was a good organizer, and while able to do an immense amount of detail work, did not enjoy it. He hated delays, and fretted under them. To his energetic conception, Rome should have been built in a day, or a week at most, and he would have seen to it that it was done. He was a very firm friend, and tender-hearted to a degree that would surprise those who only saw the positive, business-like side of his character. Hard worker, clear thinker, plain speaker, loyal friend, all who knew him will long regret his untimely death.

Mr. Dale throughout his life maintained relations of friendship with railroad people whom he had known before he became a rubber man, and likewise many acquaintances of later date. He was for years a member of the Conductors' Association of New York, and on retiring from the highest position in that body, in 1893, was presented with a handsome gold watch by the members.

INCREASING YIELD OF BALATA.

WHILE the returns of production of balata gum leave something to be desired in the way of definiteness, they at least demonstrate that a steady increase has taken place in the yearly sales of this material. The principal sources of balata—all in South America—are Venezuela and the Guianas. The volume of exports from each of the producing countries is reported with reasonable exactness, but there is some interchange between the countries which doubtless leads at times to the duplication of small quantities.

To go back twenty years, British Guiana in 1887 exported 80,942 pounds of balata and Dutch Guiana 1093 pounds—total, 82,035 pounds; Venezuela exported none. By 1896 the figures had grown to 332,262 pounds for British Guiana, 433,900 for Dutch Guiana, and 105,000 for Venezuela—total 931,201 pounds.

During the past six years the yearly output of the three countries named has been as follows (in pounds):

YEAR.	British Guiana,	Venezuela.	Dutch Guiana.	Total.
1902.....	388,037	1,796,854	706,200	2,891,091
1903.....	743,553	2,408,073	814,000	3,965,626
1904.....	806,133	1,993,028	569,800	3,362,961
1905.....	774,665	2,816,169	530,800	4,127,634
1906.....	728,231	2,710,726	594,000	4,032,957
1907.....	834,728	3,203,141	765,120	4,802,989

The figures in the table are given for calendar years for Venezuela and Dutch Guiana, and fiscal years for British Guiana. The exports of balata from British Guiana during the calendar year 1907 amounted to 687,225 pounds, the largest for that colony for any year yet recorded. The exports for the calendar year 1906 were 630,036 pounds.

French Guiana has some balata, but it has been exploited to a very small extent. Beginning with 1901 small shipments have been made annually, but not to exceed 16 tons in any one year. British import returns include balata in gutta-percha, and hence credit gutta-percha to all the countries and colonies above named, and also to Panama and Colombia. These two countries appear to have supplied Great Britain, in 1906 and 1907 respectively, with 14,672 and 33,040 pounds of gutta-percha. Of course it was not the article known commercially as gutta-percha. If it was balata, it was in addition to the production recorded in the preceding table, no matter what its source.

The American market does not yet call for a great deal of balata, though the figures are larger now than a few years ago. The customs service records the importation of 374,220 pounds in the fiscal year 1905-06 and 799,201 pounds in 1906-07, but as between different grades of india-rubber—and this is what it amounts to—the classification is not likely to be very exact. [See THE INDIA RUBBER WORLD, July 1, 1901—page 295.]

A NEW JAR RING MACHINE.

THE jar ring machine illustrated here is of a new design, has been given a thorough trial, and has given most satisfactory results. Among the characteristics are speed, accuracy, ease of operation, simplicity and durability. Its construction em-



braces light weight carriage, bed and drip pan combined. It is referred to as making 160 absolutely uniform rings per minute. It can be supplied with the straight knife, as shown in the illustration, or with a circular knife, as desired. Manufactured by A. Adamson, Akron, Ohio.

Planting Results in the Far East.

BUKIT RAJAH ESTATES.

THE directors of the Bukit Rajah Rubber Co., Limited, at the fifth annual meeting (London, July 6), reported rubber results as follows:

YEAR	Yield (pounds).	Gross Price.	Dividend.
1904-05.....	6,811	5s. 5.94d.	....
1905-06.....	33,203	5s. 4.48d.	6%
1906-07.....	118,982	5s. 3.62d.	30%
1907-08.....	103,521	3s. 8.87d.	30%

The rubber crop this year is estimated at 181,500 pounds. The acreage is 2368; acreage in bearing 720.

THE CICELY RUBBER ESTATES.

At the third annual meeting of Cicely Rubber Estates, Limited (London, June 23), the report stated that the results attained thus far have been from 150 acres planted to rubber, but that additional plots of about 200 acres would be coming into bearing each year for three years to come. The company's results to date may be tabulated thus:

	1905-06.	1906-07.	1907-08.
Number trees tapped.....	6,619	8,020	9,000
Rubber yield, pounds.....	9,184	19,009	43,695
Average per tree.....	1.33lb	2.37lb	4.85lb
Average price realized.....	5s. 6d.	4s. 11d.	3s. 6d.
Average cost per pound.....	2s. 10d.	1s. 9d.	1s. 2d.
Dividend, preferred.....	10%	20%	42½%
Dividend, ordinary.....	5%	15%	37½%

It will be observed that the cost of producing the rubber (the figures do not include London charges) has declined almost as much as the gross price realized. What is better, the cost will remain at the low figure when selling prices have gone up again. The selling prices mentioned give \$1.78½ (gold) as the average product per tree in the first year; \$2.83½ per tree in the second year; and \$4.13 in the third year, despite the lower figure realized per pound.

FEDERATED (SELANGOR) RUBBER CO., LIMITED.

At the third annual meeting (London, July 9) the report showed 23,618 pounds of rubber to have been gained from 27,483 trees. Sales of rubber (22,872 pounds) realized an average of 3s. 7½d. [= 88 1-5 cents] per pound. Last year's yield was 7871 pounds, sold at 4s. 7d. [= \$1.11½]. The company have a small and declining yield of coffee. The rubber yield for this year is estimated at 45,000 pounds. The dividend for the year just closed—the first declared—is 8 per cent.

LONDON RUBBER SHARE PRICES.

A RECENT circular from Gow, Wilson & Stanton, Limited (London) reports: "There is a steady investment in progress in rubber shares, and the market is beginning to show a healthy aspect," reference being had to improvement since the period of the lowest point reached in crude rubber prices. Prices are given on the shares of 27 rubber producing companies. Recent quotations were 12s. and 13s. for Vallambrosa 2 shilling shares; 10s. 3d. and 10s. 9d. for Linggi 2 shilling shares; £3 9/16 for Anglo-Malay £1 shares; 13s. 6d. and 14s. 6d. for Selangor 2 shilling shares; £4¾ for Bukit Rajah £1 shares; £2¼ for Consolidated Malay £1 shares. Actual transactions are reported, and in the case of some issues considerable business done.

REPORTS OF PLANTING COMPANIES.

NOTWITHSTANDING the great volume of information relative to rubber planting companies at all times available to English investors, Mr. W. G. Tarbet, who has an intimate knowledge of this field, has found reason for issuing a daily *Rubber Investor*, from 2, Mincing lane, E. C., London, of which about a hundred numbers have been issued to date. The latest number to hand quotes current price of 149 rubber company

share issues at a low discount, but most of them above par, up to 6 times the face value of the shares. Mr. Tarbet is bringing out, in connection with his share quotations, a series of pamphlets, each devoted to the position of some leading rubber planting company—the Vallambrosa, Bukit Rajah, and so on—giving such information as is likely to interest an investor or intending investor. These very excellent reports are priced at 6d. each.

EXTENT OF PLANTING IN MALAYA.

THE report for 1907 of the Planters' Association of Malaya shows this organization to be made up of delegates from ten local associations in the Federated Malay States and adjoining districts. The report contains statistics from 183 estates which, at the end of the year, reported 417,147 acres under cultivation, of which 111,341 were devoted to rubber. There were 12,978 acres under rubber in bearing. The yield of rubber during the year is stated at 15,041¼ cwt., which would work out at about 1,684,620 pounds. The number of laborers reported on these estates was 69,042.

THE TRADE IN RUBBER TREE SEEDS.

EXPORTS of Para rubber seed from Ceylon during 1907 as officially stated amounted to 2016 cwt. [= 225,792 pounds], of the value of 127,175 rupees [= \$41,259.30]. What is of particular interest in this connection is the wide distribution of these seeds, including 1942 cwt. to the following countries:

India.....	750	South America.....	90
Straits Settlements.....	337	Java.....	60
New South Wales.....	187	Burma.....	42
British North Borneo.....	124	British East Africa.....	58
Mauritius.....	125	Great Britain.....	45
Hongkong.....	93	Queensland.....	25

The seeds here referred to have been in demand, of course, for planting purposes, and the profit from their sale has been of definite advantage to the owners of plantations in both Ceylon and Malaya. Profits from this source can not be expected to be permanently large, but Mr. H. A. Wickham, in his new book "Para Indian Rubber," makes a suggestion which is supported by the opinion of most of the authorities on rubber in the Far East. He says: "Another advantage in the *Hevea* over other rubber producing trees, and a point of importance as an asset in permanent estate production—as I pointed out so long ago as the 'seventies' (in my report for the India office)—the trifling seed casks of the *Hevea* contain an oil seed giving freely, and in large quantity, a pure drying oil which is remarkable for its very fine quality. It will also give an 'oil cake' of unquestionable quality, as all cattle, from forest deer to bullocks, are very fond of it."

The *Hevea* is a prolific producer of seeds, even at an early age.

JAVA.

THE planting of *Hevea* rubber continues on a liberal scale, but as yet no trees of this species have become productive. The *Times of Ceylon* has had an interview with a recent traveler in Java who saw no *Hevea* on the island more than 3 years old. The planted 'rambong' (*Ficus*) rubber produced here, however, has been of good quality and good quantity, bringing the highest prices for "rambong."

FRENCH INDO-CHINA.

THE prospectus has been issued in France of the Concessions Agricoles et Plantations de Caoutchouc Tartarin, Société Anonyme, with 600,000 francs [= \$115,800] capital, to acquire and extend plantations in central Tonkin. There are now 50,000 planted *Ficus elastica* on the estate. Offices: 102, rue Nolle, Paris.

Planting Results in Mexico.

RUBBER YIELD ON "LA ZACUALPA."

A REPORT signed by O. H. Harrison, president of the La Zacualpa Plantation Co., on their "La Zacualpa No. 1" rubber plantation, in the Mexican state of Chiapas, says: "During the past year and up to December 10 last (1907) there were 257,760 different tappings of cultivated trees and the result was 40,000 pounds of refined rubber, giving an average of 252 ounces per tree from each tapping. A few of these trees were 7 years old; some were 6, but we estimate the majority at only 5 years, so that the average would be slightly under 6 years."

The company plan to tap their trees three times this year, but the report does not state how many of the trees dealt with last year were tapped more than once. It is mentioned, as showing the capacity of the trees that several of the age of 7 years were tapped twice last year—yielding about three ounces each at the first tapping and 8 to 11 ounces each four months later when bled severely.

The report continues: "The actual cost of collecting and curing the 40,000 pounds of refined rubber in 1907, on La Zacualpa No. 1 was \$2955.40, or 74 cents [gold] per pound. Figuring approximately 8 cents per pound as additional for maintenance and general expense of marketing, etc., makes a total of 15 cents per pound as the cost of harvesting and marketing."

MEETING OF MEXICAN RUBBER PLANTERS.

THE invitation for the summer meeting of the Rubber Planters' Association of Mexico is given in full below. The secretary, writing at a later date, informed THE INDIA RUBBER WORLD: "I regret that I am unable to give you the program in detail. The committee having the matter in charge is composed of busy planters who have not crystallized a program." The invitation follows:

At the meeting of the Rubber Planters' Association in February last, it was decided to hold a discussion meeting during the summer somewhere on the isthmus of Tehuantepec, and a committee was appointed to make the necessary arrangements.

This meeting will be held on July 31 and August 1 at San Geronimo, Oaxaca, and papers will be read by a number of gentlemen, among them Dr. Pehr Olsson-Seffer, Mr. J. C. Harvey, Mr. V. O. Peterson, Mr. L. A. Ostien, Mr. A. B. Coate, and Mr. Zeferino Dominguez.

It was intended to put on exhibition at this meeting the various exhibits which are to be shown at the International and Allied Trades Exhibition in London, September 14 to 26, but it has been found that these exhibits have to leave Vera Cruz on July 30, in order to reach London in time. A special circular, with shipping instructions, will be sent to members of the Association and exhibitors by the committee in charge.

All interested in rubber culture, and especially all members of the association, are cordially invited to be present at the meeting and to present papers or subjects for discussion.

Kindly inform Mr. V. O. Peterson, San Geronimo, Oaxaca, if you intend to be present, in order that accommodations may be provided.

W. B. MURRAY, Secretary.

City of Mexico, July 1, 1908.

Further details in relation to the Mexican display at the London rubber exhibition appear on another page of this paper. The post of secretary of the Association is now filled by Mr. W. B. Murray, editor of the *Mexican Investor*, his address being Apartado 117 bis, City of Mexico.

PLANTING COMPANY NOTES.

THE annual report of the Utah-Mexican Rubber Co. (Salt Lake City, Utah), after giving an account of the progress of their planted rubber in the state of Tabasco, Mexico, refers to the success of neighboring planters whose rubber is older. One paragraph says: "Another neighbor, Señor Acuña, had just returned from New York, where he had taken and sold 6000 pounds of rubber from 5000 cultivated trees of various ages." The pamphlet includes a photographic view of the San Juan Bautista store of Harburger & Stack, a New York firm (recently illustrated in THE INDIA RUBBER WORLD), showing in front of it what is described as 3000 pounds of rubber—"one day's receipts from a Tabascan rubber planter."

Mr. J. Herbert Foster, manager of the "Meriden" rubber plantation, at Tula de los Tuxtlas, in Mexico, reports to his company that he and two neighboring planters joined lately in shipping to New York 3000 pounds of cultivated rubber. Mr. Foster has resigned the secretaryship of the Rubber Planters' Association of Mexico, in order to be able to give his whole time to the Meriden plantation and has signed a contract to continue as manager for two years.

GUATEMALA.

THE Los Angeles Rubber, Lumber, and Fruit Co., organized in New Orleans in 1901, still hold the land they then acquired on the line of the Northern Railroad of Guatemala, about 30 miles from the coast. The company are operating a banana plantation there and have considerable planted rubber, now in the seventh year. They are understood to be desirous of disposing of their rubber property.

The first annual report of Cie. Franco-Belge du Guatemala [see THE INDIA RUBBER WORLD July 1, 1908—page 324] relates to the company's acquisition of lands—now aggregating 30,000 hectares [=74,130 acres]—and getting the sugar and lumber interests into shape. Evidently work has not been begun in connection with rubber.

RUBBER IN THE FRUIT OF A MEXICAN SMILAX.

REPORTING on an investigation of the fruits of a certain variety of smilax found in Mexico, C. Mannich writes in the *Notizblatt* of the Berlin royal botanical gardens (No. 42—March 11, 1908):

"23.7 grams of this fruit were placed at my disposal. The average weight of the fruit is 0.196 grams each.

"On breaking open the fruit, each seed proved to be provided with a thin covering or shell of a very elastic, brown substance, resembling rubber. This rubber like membrane was separated by mechanical means from the skins and kernels. The product thus obtained from 23.7 grams of fruit consisted of:

Rubber shells	0.6 grams.
Kernels	15.9 grams.
Skins	7.2 grams.

"The amount of rubber shells is consequently equivalent to 2.53 per cent. of the total weight of the fruit.

"Attempts were made to determine the percentage of pure rubber contained in the rubber shells. However, during this test such unforeseen difficulties were encountered as to make it impossible to conclude the determination. In fact, it was found that the substance in question is insoluble in all of the commonly used rubber solvents. On the other hand, these solvents caused each separate membrane to swell until it became a gelatinous mass. Tests were made with the following solvents: Carbon tetrachlorid, toluene, and chloroform. Toluene dissolved 10.8 per cent.

"In view of these results it appears rather doubtful whether the elastic shells which, in outward appearance, are exactly similar to rubber of good quality, contain any considerable amount of true rubber. The material at hand (0.6 grams) was insufficient for making further tests."

A COMMUNICATION printed in the New York *Herald*, from a civil engineer, attributes the frequent bursting of fire hose while under pressure at critical moments to the custom of folding or creasing hose when it is stowed away in the carriages. This correspondent advocates an immediate return to the old time reel as better adapted to preserving the life of the hose.

The Rubber Tire Field.

AN UNSETTLED TARIFF QUESTION.

THE question remains unsettled as to the rate at which automobile tires are dutiable when imported into the United States, in connection with, but not mounted upon, automobiles. The Auto Import Co. and other importers at New York protested last year against the payment of duties on certain automobiles as an entirety at 45 per cent. *ad valorem*, on the ground that the tires should be admitted as manufactures of india-rubber, on which the rate is only 30 per cent. The collector at New York was upheld by the board of United States general appraisers, who decided: "The tires accompany each machine; are packed in the same case with it; they are of the particular size for and are intended to be used on it, and without them the machine would be practically useless." The appraisers were unable to see why the tires forming part of a given automobile should be admitted at a rate of duty apart from that assessed against automobiles any more than other parts—wooden bodies, upholstery, bolts, or nuts—all of which materials are covered by provisions of the Tariff act equally specific with that of manufactures of india-rubber. [See THE INDIA RUBBER WORLD, May 1, 1907—page 244.]

The Auto Import Co., Archer & Co., and Massenat Deroche severally made application for review of the decision by the board of general appraisers to the United States circuit court for the southern district of New York, in which a decision adverse to the government was filed on May 23 last. The decision, written by Judge Platt, points out that the automobiles in question were imported with tires accompanying them, but the tires had not prior to importation been attached in such a way as to be capable of immediate use, and they were interchangeable and might or might not be used on the machines with which imported. Hence it was held that the tires and machines, never having been assembled in the country of production, did not together constitute an entirety, but were dutiable as though imported independently. It was observed that the tires are not so markedly a part of an automobile as nuts, bolts, and the like, because these latter are individual to the particular make of machine and are intended to stay until worn out, when they will be replaced by similar parts. But the tires are detachable and interchangeable, and may or may not be used on the particular automobile according to the choice of the owner.

The government has taken an appeal to the United States circuit court of appeals, second circuit.

It may be of interest in this connection to note that 1106 automobiles were imported into the United States during the fiscal year 1905-06; 1170 during the year 1906-07; and 974 during the first eleven months of 1907-08, presumably each equipped with tires. If the contention of the importers should prevail it will affect the import duty on nearly a hundred sets of tires per month.

TAXICABS AND THE TIRE TRADE.

THE rubber tire trade can hardly fail to be interested in the motor cab situation in Great Britain. The success of the cab services already established is leading to the formation of new companies everywhere, until it seems that the horse drawn cabs are doomed, and that cheaper, speedier service is at hand, employing a vastly greater number of vehicles, all requiring rubber tires.

The gross receipts of the General Motor Cab Co., Limited, of London, for the month ended February 13 last were £26,308 [= \$128,027.88], since which time they have increased continually, the figure for the month ended June 13 being £44,573 [= \$216,920]. The company's accounts this year will be made up to July 31, instead of May 14, as usual, making the year

about ten weeks longer. Already dividends have been declared amounting to 10 per cent.—or £30,700 [= \$241,805]—and a further dividend is expected at the end of the business year.

A favorable showing is made also by the United Motor Cab Co., Limited, of London. The two companies named, the pioneers in the metropolitan motor cab interest, were founded by Mr. Davison Dalziel, who has perfected plans for the absorption of the United by the General company, of which he will continue to be chairman. The capital of the combined businesses, to date from August 1, is to be £1,000,000 [= \$4,895,000]. The £1 shares of the General Motor Cab Co. were quoted lately at 25/0, 20 shillings, and the United Motor Cab Co.'s shares at 24/0 25/0.

The formation of new motor cab companies, throughout the United Kingdom, is reported all the while. Not only are new services reported in London and in the larger provincial towns, but cab lines are to run between towns. For instance, the Birmingham and Midlands Taxi-Cabs Co., Limited, with £250,000 [= \$1,219,625] capital, intend to operate 225 cabs in and between Birmingham and neighboring towns. They are referred to as having contracted with the Dunlop Pneumatic Tyre Co., Limited, for tires and detachable rims, and with the affiliated Dunlop Rubber Co. for various rubber accessories.

To the list of taxicab companies operating in New York city given in THE INDIA RUBBER WORLD last month must be added the Motor Taximeter Cab Co., lately incorporated under the state laws with \$150,000 capital authorized, to take over the taxicab service in the city maintained hitherto by the New York branch of Renault Freres, the French automobile manufacturers. Renault Freres have taken on also the making of taxicabs, large orders for which they have received from Paris and London. Fifty additional Renault cabs have been ordered by the new New York company.

The latest taxicab enterprise is the American Taximeter Cab Co., organized in New York, with \$1,500,000 capital, to operate cabs in New York, Chicago, Philadelphia, and Washington.

In Chicago the Auto Taxicab Co. has been organized, with \$30,000 capital, to inaugurate a service of Renault cabs, of which 50 have been ordered and to be delivered.

TIRE COMPANY NOTES.

THE sale of "Continental" tires in Australia is controlled by The Continental C. & G. Rubber Co., Pty., Limited, of Melbourne. Lord Northcote, the governor general, has appointed this company purveyors of tires to his Excellency, and authorized them to advertise themselves as such.

Continental Caoutchouc Co. (Nos. 1788-1790 Broadway, New York) are mailing to automobile owners some valuable information in convenient form on the upkeep of tires; also useful reference tables on interchangeable sizes—metric and American—proper inflation, and carrying capacity for "Continental" tires.

Mr. Arthur W. Moore has resigned the position of chief clerk of the passenger department of the Erie railroad in Chicago to become city salesman for the Firestone Tire and Rubber Co. (Akron, Ohio). He hopes to build up a good trade in supplying tires and other rubber goods to railroad men who own automobiles.

Michelin Tire Co. have established a branch at No. 2001 Euclid avenue, Cleveland, Ohio, in charge of Richard Tracy. They have appointed R. F. Thompson Pacific coast representative, with headquarters at San Francisco.

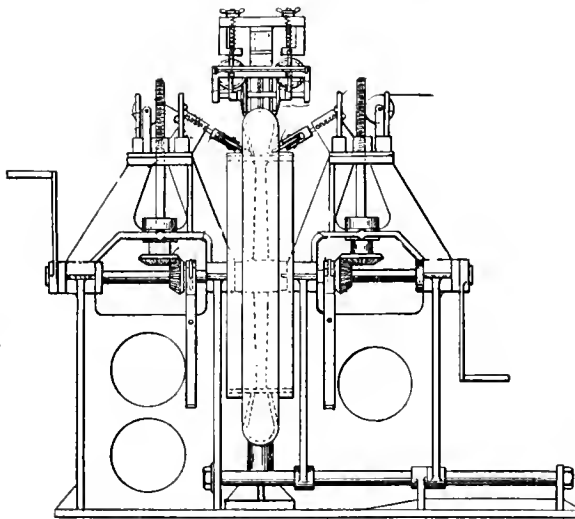
Two of the directors of the Midgley Manufacturing Co. (Columbus, Ohio,) elected at the annual meeting in April, Thomas Midgley and Charles S. M. Krumm, have resigned, being succeeded by B. D. Huggins and A. H. Johnson.

RESULT OF A TIRE PATENT SUIT.

In the United States circuit court for the district of Massachusetts, in *re* Boston Woven Hose and Rubber Co. v. Pennsylvania Rubber Co.—a suit for injunction to restrain the defendant from alleged infringement of United States patent No. 406,577, for a pneumatic tire, issued January 5, 1892, to Frederick Schrader, of Philadelphia—a decree was entered dismissing the bill of complaint on the ground that the patent claim was not infringed. The plaintiff appealed to the United States circuit court of appeals for the first circuit, in which court on July 15 the following was filed: "The decree of the circuit court is affirmed, and the appellee recovers its costs of appeal." Details regarding this suit appeared in THE INDIA RUBBER WORLD June 1, 1907 (page 290).

BAYNE-SUBERS TIRE WINDING MACHINE.

The illustration shows one of a series of drawing relating to a machine for laying threads in such a way as to form a fabric in connection with tire shoes that will give every bit of strength that the threads would give normally if woven, and at the same time a greater degree of resiliency. The machine,



AUTOMOBILE TIRE WINDING MACHINE

in brief, is so built that crossed threads, which are presumably covered with rubber cement, are first laid over the whole tread surface of the tire. Then threads similarly prepared are laid longitudinally above the crossed threads, but not in contact with them. These layers of crossed threads and longitudinal threads are alternated until a strong smooth fabric is built up to the rubber tread, when the whole mass is vulcanized in the usual way. This machine is the subject of United States patent No. 847,041, granted to Eugene D. C. Bayne and Lawrence A. Subers.

EFFECT OF RUBBER TIRES ON ROADS.

THE objects of the International Road Congress to be held in Paris on October 11-18 have had notice already in these columns. [See THE INDIA RUBBER WORLD, May 1, 1908—page 254.] The official program, later to hand, indicates that the questions to be considered at the Congress are even more interesting from the standpoint of the tire trade than was at first apparent. The idea is to consider roads as they now exist and as affected by the means of conveyances over them in vogue hitherto, after which will be taken up the effects of the more modern means of conveyance on the road. The influence of pneumatic and other rubber tires on various types of roads will be studied; also of anti-skid devices, and so on. Finally is to be taken up the consideration of how highways should be constructed to fit them for the requirements of the automobile age, no one being bold enough to suggest that existing roads be protected in their present state by suppressing the automobile.

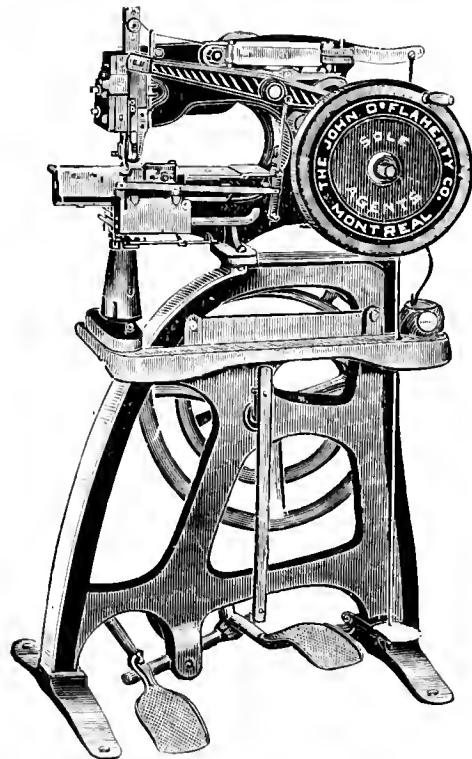
The French government, at whose instance the road congress has been called, has spared no pains to give it encouragement. The French railways will grant half rates both to delegates to the congress, and for exhibits to be shown in connection therewith. President Roosevelt has appointed as delegates from the United States: Logan W. Page, director of the office of public roads, department of agriculture, at Washington; Colonel Charles S. Bromwell, of the United States army engineer corps, in charge of the public buildings and grounds at Washington; and Clifford Richardson, of New York, an authority on bituminous road building materials.

* * *

At the first Legislative and Good Roads convention of the American Automobile Association (Buffalo, New York, July 7) one of the papers read was by Mr. L. W. Page, mentioned in the preceding paragraph, on "The Effect of Automobiles on Macadam Roads." He showed by illustrations how rapidly moving cars raise dust and loosen small particles of the roadways.

SEWING HORSESHOE PADS.

THE question has so often come to the office of THE INDIA RUBBER WORLD, "Who makes a machine for sewing horse-shoe pads?" that it is a pleasure to illustrate and describe the new Pearson Automatic No. 6. It is really a harness sewing machine and sews wax thread through thick and thin work, without adjustment and without dropping a stitch. Although



SEWING MACHINE FOR HORSESHOE PADS.

the machine is known as a wax thread machine, it will sew with either dry thread, liquid-wax, or mucilaged thread. The machine is light running, simple and practically automatic. It is hardly worth while in this article to mention the parts in detail, as rubber factories that are interested can easily see the machine or get circulars from the sole agents in the United States, The John O'Flaherty Co., Rouse's Point, New York.

AFTER exhaustive tests of various makes the War office have placed their contract for tires with the Avon India Rubber Co., Limited, of Melksham, Wilts.

Rubber Interests in Europe.

CONSOLIDATION IN THE TRADE IN RUSSIA.

WHAT is described by the *Gummi-Zeitung* (Berlin) as a "rubber trust" is reported by that journal to have been formed in Russia. As is well known the rubber industry in Russia is chiefly in the hands of two great companies, located respectively at St. Petersburg and Riga, though several smaller rubber factories exist within the empire. As the news reaches Germany, the two large companies have become practically amalgamated, in connection with which some of the less important concerns have been purchased outright.

The report is that one-half of the capital stock of the "Prowodnik" firm at Riga, has been acquired by the Russian-American India-Rubber Co., of St. Petersburg, at a premium of 100 per cent. At last accounts the share capital of the "Prowodnik" was stated at 7,000,000 rubles [= \$3,605,000], while the reserve funds stood at 7,187,003 rubles. At the annual meeting of shareholders of the "Prowodnik" company, on May 16, one of the executive heads of the Russian-American company was elected a member of the board of directors. The Russian-American company is capitalized at 8,000,000 rubles [= \$4,120,000], with substantial reserves.

* * *

The india-rubber industry in Russia had its beginning soon after 1830, when Henry Kirstein started a small factory in St. Petersburg. He had imitators from time to time, but none of them persisted long, and in 1853 he was alone in the field. Again there were newcomers, however, and Kirstein already had three rivals when, in 1860, the Russian-American India-Rubber Co. was organized at St. Petersburg, with a capital of 500,000 rubles. The new company finally absorbed Kirstein's factory and such new rubber businesses as were started from time to time, and for years held practically a monopoly in rubber goods in Russia. From the beginning "galoshes" figured prominently in the products, but gradually other lines have been added until now practically everything in rubber for which there is any demand in Russia is made at St. Petersburg. The export trade, especially in rubber footwear, is large. The company have always been alert to make themselves and their goods known, as an evidence of which was the superiority of their exhibit at the Chicago World's Fair in 1893, to anything else in rubber seen there.

Financially the St. Petersburg company seems always to have been successful. They have paid dividends of 50 per cent. and even higher, though for a few years past this rate has not been attained. The dividend for 1907 was 25 per cent., which called for a disbursement of 2,000,000 rubles [= \$1,030,000]. A correspondent of THE INDIA RUBBER WORLD writing from Europe some years ago mentioned the selling of some shares in the Russian-American company at 10,000 rubles—ten times the par value.

* * *

The year 1888 saw the organization of a new rubber company on an important scale at Riga, and in June of the following year its factory was put in operation, since which time it has experienced a constant growth in size, capacity, working force, and production, while profits have been well maintained. This company has a long name in Russian which is not more briefly expressed in either German or French, but it may be referred to here as the Russian-French India-Rubber Co., or simply as the "Prowodnik" firm, the latter term designating the suburb of Riga in which the rubber works are located. Four thousand workers are employed, and the production embraces footwear in very large volume, general rubber goods, linoleum and asbestos. The net profits and rate of dividends for three years have been:

	1905	1906	1907
Net profits	1,013,495	1,750,148	1,714,571
Dividend rate	8%	12%	12%

Not only do these factories aim at supplying the Russians with all their requirements in rubber goods, but so far as possible Russian materials are used. Of course they are obliged to import their crude rubber, but not so with reclaimed. Both the St. Petersburg and Riga companies have extensive reclaiming plants built in the United States—the home of rubber reclaiming—and embodying the latest practice.

REFERENCE is made to two other Russian firms by the *Gummi-Zeitung*, as follows: "It is reported as an assured fact that the firm of Weyerbusch & Co., in Moscow, was bought up about two weeks previously, and that the former proprietor had a large share in the purchase of the 'Prowodnik' stock. The stock of the Moskauer Gesellschaft für Gummiwaren-Manufaktur [Moscow Rubber Works], whose shares have been unsaleable for a long time past, have likewise been secured for the trust." The Moscow company was referred to lately as having a capital and reserves of about 2,000,000 rubles.

Our contemporary remarks further: "The purchasing of crude rubber supplies for the united manufacturing concerns will probably be centralized in the near future, and this undoubtedly will greatly influence the crude rubber market, in view of the large requirements of the consumers involved."

* * *

We quote from a later issue of the *Gummi-Zeitung*: "After we have twice published reports concerning the combination of the Russian rubber goods manufacturers without having been contradicted by any of the interested parties, the daily press is now publishing a notice under the heading 'The Russian Rubber Industry Not Formed Into a Trust.' In view of this notice we would point out that our reports were based on authentic data. If they were erroneous, the manufacturers mentioned in the same would certainly have been the first to contradict them, and to ask us to correct our statements. Their failure to do so constitutes an indirect confirmation of the truth of our reports."

"If the 'Prowodnik' firm has sent a refutation to the daily press, this may likewise be explained by the fact that the reports in the daily papers were different from ours and wider in their scope. While we merely stated that the St. Petersburg rubber company had bought a majority of the 'Prowodnik' stock, the daily papers reported that the 'Prowodnik' had ceased to be an independent company in consequence of the aforesaid combination. This is certainly not in accordance with the fact, and the refutation of this report by the 'Prowodnik' was, therefore, justified at least to that extent. This refutation does not, however, deny the existence of the combination as such."

* * *

TO THE EDITOR OF THE INDIA RUBBER WORLD: Answering to your letter of June 30, we beg to say that we have only regulated the annual production of galoshes between the two companies, according to the quantity which probably can be placed in our country. Yours truly,

St. Petersburg, July 11, 1908.

NETHERLANDS.

AN important business in Rotterdam has been reorganized as a British public company, under the style R. S. Stokvis & Zonen, Limited with £375,000 [= \$1,824,837.50] capital authorized. The business was founded in 1844 by the late R. S. Stokvis, and four years ago was formed into a private limited company under the Dutch law—R. S. Stokvis & Zonen, Handelsmaatschappij. The business is in iron, steel, and hardware, the house buying chiefly

from Great Britain and selling in Holland, Belgium, and the Dutch colonies. The sales for 1907 amounted to £482,277 [= \$2,397,223.72]. The profit two years ago was £41,539 [= \$245,048], but last year, owing to the business depression, there was a decline. The board of the new company consists of Samuel R. Stokvis, a son of the founder, as chairman; five members of the third generation of the Stokvis family, and an English director, Sir George Scott Robertson, M. P., a railway company director. The Stokvis house has taken a prominent position in the automobile accessories trade, handling a full line from leading makers, including the "Gaulois" tires, made by Bergougnan et Cie., of Clermont-Ferrand. The Stokvis exhibit at the 1908 Amsterdam automobile exhibition was one of its leading features.

SWITZERLAND.

THE rubber goods business of Max Bertschinger, at Zurich, has been taken over by the firm Lamprecht & Co., composed of F. Lamprecht and F. Sattler, general partners, and A. Bertschinger, silent partner. They are representatives in Switzerland of William Warne & Co., Limited (London), and carry in stock an extensive line of druggist's sundries, surgical goods, and the like.

AUSTRIA-HUNGARY.

THE Internationale Elektrizitäts-Gesellschaft, electrical supply contractors, of Vienna, made a net profit in 1907 of 2,555,000 kronen [= \$518,005], as compared with 2,503,000 kronen [= \$508,100] for the preceding year. A dividend of 8 per cent. for the year was declared.

RUBBER NOTES FROM CANADA.

TWO rubber exhibits announced for the annual Canadian National Exhibition, to be held at Toronto, August 29 to September 14, are those of the Canadian Rubber Co. of Montreal, Limited—to be made by their Toronto branch—and the Dunlop Tire and Rubber Goods Co.

OUTING OF CANADIAN RUBBER EMPLOYEES.

THE fifth annual picnic tendered by the Canadian Rubber Co. of Montreal, Limited, to their employes took place Saturday, July 11. Two large boats of the Richelieu and Ontario Navigation Co. were chartered, and carried some 2100 people to Lavaltrie, about 45 miles below Montreal on the St. Lawrence river. The weather was superb. On arrival at the grove, lunch was served in a large circus tent, followed by racing and dancing. The French Canadians simply love to dance, on the boat, in the broiling sun, anywhere; as long as the music is kept going the French Canadian girl will dance. The First Victoria Rifles band, the best regimental band in Montreal, discoursed well known airs, while two orchestras played for dancing, one on each boat. The return trip was in the moonlight, and to appreciate a moonlight trip on the St. Lawrence, one has to experience it. The whole staff of the company accompanied the employes, and freely participated in the entertainments. The president, Major G. W. Stephens, was a host in himself, being very popular with the employes. The crowd arrived back at Montreal, a tired but happy people, who voted that it was the "best ever." Mr. A. D. Thornton was in charge, and was not the least satisfied of the officials.

CANADIAN EXPORTS AND IMPORTS.

OFFICIALLY stated values of exports of Canadian manufactures of india-rubber and gutta-percha for three fiscal years ended March 31:

To—	1906.	1907.	1908.
Great Britain	\$88,007	\$37,406	\$52,947
United States	199,303	220,002	11,540
Australasia	50,506	41,409	47,813
Other countries	103,904	81,701	92,530
Total	\$442,810	\$381,478	\$204,830

Officially stated values of dutiable imports of india-rubber and gutta-percha goods for years ending March 31:

FROM—	1906.	1907.	1908.
Great Britain	\$102,277	\$110,285	\$182,360
United States	629,946	640,748	666,307
Other countries	27,383	41,886	49,457
Total	\$760,606	\$792,889	\$898,124

NEW RUBBER FACTORY IN CANADA.

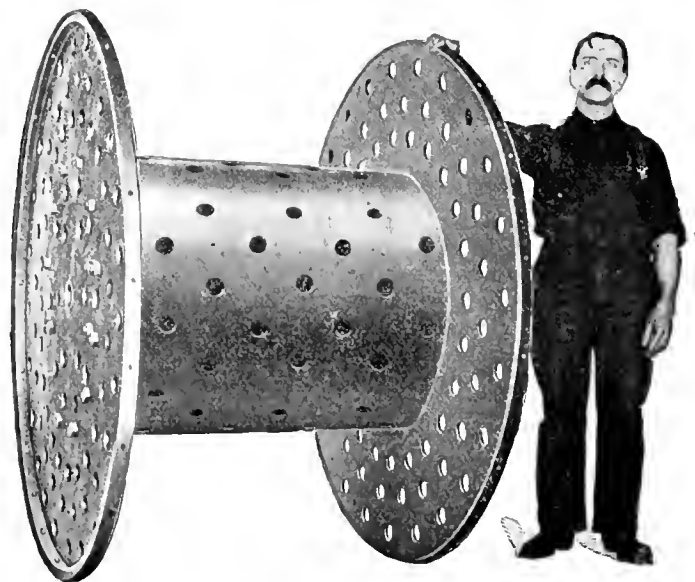
THE Kaufman Rubber Co., Limited (Berlin, Ontario), are understood to be making good progress with the erection of their rubber footwear factory. The main building is to be 200 X 60 feet, with a wing 60 X 60 feet, the whole to be four stories, in addition to a basement 10 feet in height, with a total of about 78,000 square feet of floor space. The building is of reinforced concrete, square twisted steel bars being used for the reinforce-



ment. The equipment will include the latest improved machinery, being supplied principally by the Farrel Foundry and Machine Co. (Ansonia, Connecticut). Installation of the machinery will begin early in this month; the company hope to see the building completed by the first of September, and to have the factory in operation by October 1. The registered brands of the company appear herewith—"Life Buoy" being their first quality brand and "Rubber Leaf" their second quality brand. Details in THE INDIA RUBBER WORLD, December 1, 1907 (page 90).

STEEL VULCANIZING REELS.

AN extensive use is made in insulated wire factories, of steel reels, such as that shown in the illustration, which, by the way, is 60 inches in diameter. They are used for handling wire during the processes of manufacture, such as vulcanizing.



SIXTY INCH VULCANIZING REEL.

insulating, braiding, twisting, and annealing, as well as for shipping. Another form of steel reel, from the same makers, has one head capable of being readily removed, while when put in place it will stay without coming loose. There are occasions when the reel with a removable head is particularly convenient, especially in handling cables during vulcanization. Made by Frank Mossberg Co., Attleboro, Massachusetts.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE past month finds conditions of trade in the rubber business in San Francisco about the same as during the previous month, with some of the firms reporting a slight increase in activity, and some stating that business has been slightly more quiet than last month. The general situation seems to be that the trade is enjoying a steady although uneventful business. While merchants seem sincerely to look forward to a satisfactory increase, they will not say when the busier times will commence. Most firms think that trade will begin to show increase in the fall, and some contend that it will be next spring, and after the new presidential regime has commenced that things will begin to be something in the nature of "boom" times again. Commercial life is now at a comparatively low ebb, but there is enough to do to keep all of the establishments going with fairly good results, and in some cases the reports would indicate that confidence is already sufficiently restored to have caused a considerable revival in business. Reports from the interior of the coast and country sections show that in the matter of crops the country was never in a better condition, and it is only the unsettled state of the money market that prevents conditions from being the very best.



GOODYEAR RUBBER CO.'S NEW BUILDING.

[In the store and offices now completed at Nos. 587-591 Market Street, the company have more room available than in the premises occupied before the fire of 1906.]

Mr. L. L. Torrey, manager of the Pacific coast branch of the Pennsylvania Rubber Co., reports that business is getting into pretty good shape and that collections are very good. In fact, there is a great improvement in the trade in almost all lines excepting perhaps the automobile business. So many people are now away on their vacations, who have left their automobiles idle, that there is not much buying or repairing in that line.

Mr. Redding, sales manager of the Diamond Rubber Co., states that the new store on Mission and Second streets is now completely equipped with a full stock of mechanical goods and tires, and that business is satisfactory, although still quiet.

The Barton Packing and Rubber Co., successors to Barton, Squires, Byrne, Inc., have added two more hydraulic presses to their rubber factory equipment and a new heater thus increasing the capacity about 30 per cent. Mr. Barton returned this week from an extensive trip through the Eastern states. The report of R. J. McNeilly, sales manager, is that the outlook is good for a fair fall business. The Boston company have issued a very complete new illustrated catalogue.

Mr. Matthew Hawe, treasurer of the Gutta Percha and Rub-

ber Manufacturing Co. (New York), recently made a visit to the Pacific coast, spending some time in San Francisco, where the firm have an old established branch.

William Eaton, representative of the New York Belting and Packing Co., Limited, who was injured in an automobile accident nearly a year ago, is again having trouble with his injured leg, and may again have to go to a hospital.

Mr. W. J. Gorham, of the Gorham Rubber Co., has returned from Los Angeles, where he was looking out after the company's interest in the southern portion of California. He reports that things are picking up there, and in some respects he found business better than in any other portion of the coast territory.

Ed. Garrett, coast agent for the Yankey boiler and certain rubber lines, has rented an office in the building occupied by the Plant Rubber and Supply Co., on Beale street, near Market.

Mr. R. H. Pease, president of the Goodyear Rubber Co., expects to go to Portland the 1st of August. "Business is improving," he said, "and is getting on well up to the business of previous years. We now have a great many advance orders and it looks as if the fall business would be very fair. We are settled in the new two-story building on Market street, near Second, and have more ground floor space than in our old location before the fire." The new store is handsomely fitted up in solid oak and is well arranged for both style and convenience. In this issue is shown a cut of the new building occupied by the company. It is Class A in every particular, and in one of the most prominent locations in the city.

Coffin-Reddington Co., large wholesale dealers in druggists' sundries, now occupy the new building which has been recently completed at Nos. 35-45 Second street.

Mr. W. Perkins, president of the Sterling Rubber Co., states that trade seems to be getting some better, and that the outlook is favorable for a good fall business.

Mr. Sargeant, of the Gorham Rubber Co., states that from San Francisco indications are that there will be a gradual improvement, which will be more perceptible in the fall, and that in the meantime business will continue to be rather quiet.

Mr. Kanzee, of the Phoenix Rubber Co., is now showing a new invention for which he has secured the agency—the invention of a San Francisco man, on which a patent has been applied for. The Phoenix company have secured the exclusive right to manufacture and sell the device in the United States. It is a sanitary toilet seat, especially for public lavatories. It is made of hard rubber, with rubber casket on the base. The seat is hollow on the inside, and the hollow portion contains a sponge which extends all around the seat and is kept saturated with a disinfectant.

Mr. Caldwell, formerly sales manager for the rubber mechanical department of Baker & Hamilton, is now in the employ of the Phoenix Tool and Valve Co.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

AUGUST 1 marks the eighth anniversary of the establishment of the Firestone Tire and Rubber Co., who now claim to have become the largest concern in the world devoted exclusively to the tire manufacture. The concern is the outgrowth of a business established by H. S. Firestone, August 1, 1900. At that time there were two employes—a bookkeeper and a stenographer. The tires which put into practice Mr. Firestone's patents in the line of sidewire solid tires, were manufactured by another company. The business grew until the company now operate a factory of their own, in which 600 people are employed. The business each month, according to the statement of an official, amounts to a half million dollars. Branches have been established in the principal cities of the United States and the tires introduced in all parts of the country. For a number of years the manufacture was confined to solid tires but within recent years pneumatics have been placed on the market extensively.

The annual meeting of shareholders of The Motz Clincher Tire and Rubber Co. was held on July 6. The directors chosen were Charles Motz, Gus F. Burkhardt, Nicholas H. Seil, William Wolf, Paul E. Bertsch—all reelected—E. J. Alderfer, and Howard Haupt. The officers were reelected, as follows: C. Motz, president; G. F. Burkhardt, vice president; N. H. Seil, secretary and treasurer; P. E. Bertsch, manager.

Akron Rubber companies were well represented in the Glidden tour. The B. F. Goodrich Co. had H. C. Miller, general tire representative of the company, and W. O. Rutherford, manager of the Buffalo branch, with the tour, following the route by rail and looking after the interests of the company. N. E. Oliver, manager of the Buffalo branch of the Diamond Rubber Co., represented that concern on the tour, traveling by automobile. For the first time in a Glidden tour the demountable rim was used, two cars being equipped with the Diamond demountable him. W. C. State, of Akron, represented the Goodyear Tire and Rubber Co. He drove in a Rapid truck, which carried Goodyear air bottles for the free use of tourists in inflating tires.

[The fifth annual tour of the American Automobile Association for the Glidden and Hower trophies started from Buffalo, New York, on July 9 and ended at Saratoga Springs on July 23, the route taking in seven states, including Maine. The tourists had to cross five mountain ranges and innumerable streams, and travel roads ranging from common dirt roads to the best macadam and asphalt. While primarily this is a contest between different makes of automobiles, the tire results also were watched with interest. There were 29 entries for the Glidden trophy and 14 for the Hower trophy.]

The spread of the taxicab system to Washington city has brought with it another order for solid tires for the Goodyear Tire and Rubber Co. Within the last two months the Terminal Taxicab Co. has been organized in the capital and an initial order for the equipment of 50 cabs with pneumatic tires has been placed with the Akron concern. The tires are furnished on practically the same basis as were those for the New York Taxicab Co. and the New York Transportation Co., that is, the tires remaining the property of the manufacturer and the users paying by the mile for the service. An equipment of Goodyear air bottles goes with the order.

The B. F. Goodrich Co. are mailing to their patrons copies of the annual vacation picture. It portrays a number of Goodrich salesmen in a balloon on the way to Mars. The balloon is shaped like an elephant and labelled "The Biggest in Rubber." Below is seen the plant of the company.

Mr. B. G. Work, president of The B. F. Goodrich Co., returned from Europe the last week of June. He was across the water over two months. Mr. H. E. Raymond, sales manager of the same company, is expected to return not later than August 1.

O. S. Hart and I. R. Bailey, respectively cashier and salesman for The Diamond Rubber Co., with their wives, spent a week on the great lakes in the middle of July. J. E. Argus, salesman for the Diamond Rubber Co., located in San Francisco, spent a week in Akron early in the month.

A. B. Jones, formerly engineer of maintenance of way with the Cleveland, Akron and Columbus railway, resigned his position with that company on July 1 and took a position with The Diamond Rubber Co., becoming connected with their reclaiming plant in South Akron.

The Diamond Rubber Co. are building an addition to their machine shop—a tile building over 100 feet square, and located south of the present plant. It will be connected with the main buildings by a bridge over Jackson street.

The Goodyear Tire and Rubber Co. established a branch office and store in Cleveland, Ohio, on June 1. It is located at No. 2005 Euclid avenue and is in charge of C. C. Hammerle, formerly of Akron.

The Boston branch of the Diamond Rubber Co. has been

moved from No. 174 to No. 223 Columbus avenue, where a large part of the Pope building has been leased. The change is to take effect on August 1.

A conference of the branch managers of The Goodyear Tire and Rubber Co. was held in Akron, on June 27.

The first large exclusive contract for 1909 automobiles has been awarded to The Diamond Rubber Co. It is an order for 2500 Marsh rims for the Chalmers-Detroit Motor Co., manufacturers of the new Chalmers-Detroit cars. This concern was formerly the E. R. Thomas Detroit Motor Co.

THE JOHN A. ROEBLING STATUE.

A STATUE of the late John A. Roebling was unveiled at Trenton, New Jersey, on June 30, the occasion being made a public holiday. Mr. Roebling was born in 1806 at Mülhausen, Saxony; he studied engineering and philosophy, and at the age of 25 years came to America well equipped for the important career which opened before him. Incidental to the development of his wire rope, his method of suspension for cable



THE ROEBLING STATUE.

bridges, and other important inventions, came the organization of the great factory and industries at Trenton, operated now under the style of John A. Roebling's Sons Co., by worthy representatives of the second and third generations of the family in America. The Trenton works cover 35 acres, employ 6,000 hands, and have an annual output valued at \$20,000,000. The coming of the electrical era opened the way to a development of the Roebling industries not contemplated by the founder, but the efficiency of the management has been shown by its success in placing the company in the forefront among the manufacturers of wires and cables for electrical equipment. The use of rubber for insulation by the Roebling firm is so extensive as to make of that department an important rubber manufacturing plant. The Roebling statue is of bronze, on a granite pedestal, and reaches a height of 16 feet from the ground. On the pedestal are bronze panels with inscriptions and reliefs showing the Brooklyn and Niagara bridges, etc. It was designed by William Couper, an American, and stands in Cadwalader Park, Trenton.

News of the American Rubber Trade.

UNITED STATES RUBBER CO.—DIVIDENDS.

THE board of directors of the United States Rubber Co., on July 2, declared from the net profits of the company for the fiscal year the regular quarterly dividend of 2 per cent. on the first preferred stock (including all out-standing old "preferred" stock) and the regular quarterly dividend of 1 1/2 per cent. on the second preferred stock, to holders of record on June 15, payable without closing of the transfer books on July 31.

THE OLD BOSTON RUBBER CO.—A REMINDER.

ONE of the buildings which formed premises of the Boston Rubber Co., at Chelsea, Massachusetts, has been sold to L. Snierson & Sons, who will occupy it as a flour bag factory. It is a six-story brick building at Nos. 37-39 Winnisimmet street, and was used by the Boston Rubber Co. as a warehouse. The Boston company's plant in time became the property of the United States Rubber Co., and was not operated after April 1, 1896. The sale of the building here mentioned will not interfere, it is said, with the use of the rubber company's remaining property in Chelsea for manufacturing purposes.

THE NEW TREASURER OF L. CANDEE & CO.

MR. WILLIAM H. GILBERT, of Woonsocket, Rhode Island, who was elected recently to be treasurer of L. Candee & Co. (New Haven, Connecticut), assumed the duties of that office on July 1. Mr. Gilbert began his connection with the trade 21 years ago as receiving clerk at the Milville factory of the Woonsocket Rubber Co. For some time past he has been assistant general manager of the Joseph Banigan Rubber Co., in addition to which he for several years audited the books of the branch offices of the United States Rubber Co., throughout the country.

OUTING OF THE "NATIONAL" CLERKS.

THE foremen, clerks, and salesmen of the National India Rubber Co. (Bristol, Rhode Island) had their seventh annual clambake on Saturday, June 27, at the Tobin farm. There were about 50 in attendance, including Agent LeBaron C. Colt, Secretary Walter De F. Brown, and Superintendent Cushman, who were the guests of the day. The day's program embraced various athletic sports, including a baseball game between married and single nines, won by the former—10 to 9. The clambake, presided over by James A. Munro, of the National company's printing department, was enthusiastically praised. The committee in charge of the outing consisted of Charles Henning, Edward Bunn, J. Louis Coggeshall, E. E. Wilkinson, John Conley, W. R. Davis and J. A. Munro.

HYGIENIC RUBBER WORKS, MUSKEGON.

THE Hygienic Rubber Works is the new name of the business at Muskegon, Michigan, organized early in 1907 as the Osius Chemical Co., Inc., for the manufacture of dental vulcanite and dental specialties. Dr. Frederick Osius, who was president of the first company, has become sole proprietor under the new arrangement. The new management will add the manufacture of stamp rubber. The address is Nos. 13-17 First street, Muskegon.

A CALMON BRANCH IN AMERICA.

A DISTRIBUTING center for the sale in the United States, Mexico, and Cuba of the asbestos goods and special lines of rubber goods of the Calmon works in Hamburg is to be established in New York, under the style of The Calmon Asbestos and Rubber Works of America. The local company will be incorporated in due time with the following officers: Edward H. Garcin, lately of the Combination Rubber Manufacturing Co. (Bloomfield, New Jersey), president; Rudolf Gruber, of the New York banking house of Ladenburg Thalmann & Co., vice president; Rudolf Gaerter, secretary and treasurer. Under this arrangement the Asbest- und Gummiwerke Alfred Calmon Aktien-

gesellschaft having for the first time a direct representation in the United States. The company have a capital of 1,500,000 marks [= \$2,400,000], and employ in their factories at Hamburg some 6,000 hands. Their asbestos works probably are the largest in existence. They obtain raw material from their own mines from the town of Calmon, in Quebec, Canada. The company's products include asbestos paper, asbestos millboards, asbestos yarn, asbestos cloth (for technical and mechanical purposes and for theater curtains); also Calmon's asbestos slates for building purposes, and asbestos insulating materials for the electrical industry. The Calmon rubber factory turns out all the lines of mechanical goods as well as rubber shoes and automobile tires. It is understood that Mr. Alfred Calmon, the founder of the company named and its managing director, who has paid several visits to America, will be on this side the Atlantic again in the autumn.

A LARGE CABLE CLOTH CONTRACT.

WITHIN the past month the Massachusetts Chemical Co. (Waldpole, Massachusetts) have entered into contract with one of the largest firms of insulated wire and cable manufacturers to supply their entire requirements of cable cloth. The wire and cable company in question have for many years made their own cable cloth, but have been convinced that by delegating this part of cable making to the Massachusetts Chemical Co., whose exclusive specialty is insulating compounds and the impregnating of fabrics with the same, they not only will get a better and more uniform product but get it at a lower cost than that at which they have been producing it themselves.

SCHULTZ PATENT RUBBER CO.

GEORGE W. SCHULTZ, for a number of years engaged in business in the mechanical rubber goods and asbestos fabric lines in Philadelphia, after having retired for a while, announces that he has resumed business in these lines under the new title of Schultz Patent Rubber Co., later to be incorporated under the laws of Pennsylvania. Mr. Schultz was some time a partner in Sayen & Austin Rubber Co., and later in Sayen & Schultz, which succeeded the former company in 1900. The new business is located at No. 1230 St. James street, Philadelphia. The company for the present will have manufactured for their trade a line of packings and other mechanical goods, and also asbestos specialties, from compounds and formulas which they own.

AN ASSIGNMENT.

THE R. H. Smith Manufacturing Co. (Springfield, Massachusetts) made an assignment on June 26 to Robert A. Knight and Charles H. Beckwith, for the benefit of creditors. The business of the company is asserted to have been profitable, both in the rubber stamp and stamp outfit department and in the manufacture of the Smith speedometer. It is intimated that the main reason for the assignment was that the business had outgrown its capital, and the continuation of the business is looked for. Mr. R. H. Smith, the head of the business, died recently, and a reorganization of the company was reported in THE INDIA RUBBER WORLD of June 1 (page 368).

THE DUTY ON SAFETY FUSE.

AN importation of mining safety fuse at Denver, Colorado, was assessed for duty as a manufacture of cotton, under paragraph 322 of the Tariff act, which reads: "All manufactures of cotton not specially provided for in this act, 45 per cent. *ad valorem*." The importers claimed the goods to be properly dutiable at the rate of 35 per cent. *ad valorem* under paragraph 450 of the Tariff act, as an article in which gutta-percha is the component material of chief value. After a hearing the United States general appraisers at New York sustained the protest of the importers.

HARDMAN RUBBER CO. RECEIVERSHIP.

WILLIAM A. SMITH, of Newark, New Jersey, receiver for the Hardman Rubber Co., of Belleville, N. J. [See THE INDIA RUBBER WORLD, March 1, 1908—page 203], at the end of June paid a dividend of 20 per cent. to the creditors. There are some other matters to be disposed of and some possible litigation. It is stated that a further dividend of 15 to 20 per cent. is expected.

COTTON DUCK INDUSTRY.

BALTIMORE advices are that six mills of the Consolidated Cotton Duck Co. resumed work lately, after having been closed for a fortnight, and are running four days a week. They are reported to be at work on a good order for government supplies. Mt. Vernon mills No. 1 and No. 3, owned by the Consolidated company, did not close down for the usual midsummer overhauling. The latter mills are running five days a week.

GREENWALD RUBBER CO.'S FIRE.

THE plant of the Greenwald Rubber Co. (Buffalo, New York), on June 30, was completely destroyed by fire which started in the laboratory. Mr. Lemon Greenwald, the president, advises THE INDIA RUBBER WORLD that new and larger premises have been secured, and a new equipment installed that will enable them to double their former output. They have resumed the manufacture of "Fillem", for tires, an article for which an important demand has grown up both in the United States and in foreign markets.

THE LARGEST GASKETS EVER MADE.

MORGAN & WRIGHT recently completed an order for 18 rubber gaskets, for use between the tubes of the Michigan Central Railway tunnel under the Detroit river, their purpose being to render the tunnel watertight. Each gasket is circular in form, 24 feet in diameter, and weighs 425 pounds.

SUMMER VACATION OF FOOTWEAR FACTORIES.

THE "Alice" and Millville mills of the Woonsocket Rubber Co. were closed on July 23 for periods of two and three weeks, respectively. Superintendent Schlosser, in giving notice of the shutdown, announced that on resuming work the "Alice" mill would require 100 additional shoemakers. The Fells factory of the Boston Rubber Shoe Co. will begin a three weeks shutdown on August 5. The summer shutdown of the Apsley Rubber Co. began on July 24, to last two weeks.

MILFORD RUBBER CO.—FACTORY CLOSED.

THE Milford Rubber Co. (Boston), have closed their waterproofing factory at Milford, Massachusetts. The company was incorporated May 24, 1899, with a capital of \$10,000, which was increased gradually to \$40,000. The rubber machinery has been removed from the building, which, it is understood, will be occupied by a different line of business. They may resume manufacturing at Milford, New Hampshire, removing their offices there.

NEW INCORPORATIONS.

TRIUMPH Automobile Tire Co., July 1, 1908, under the laws of West Virginia; capital authorized, \$1,000,000. Incorporators: Henry E. Keyes, Charles O. Derr, and W. E. Johnson, Homestead, Pa.; C. K. O'Hara, Akron, Ohio; W. P. Stewart, Wheeling, W. Va.

The Colorado Fisk Rubber Co., June 22, 1908, under the laws of Colorado; capital, \$5,000. Incorporators: Harry G. Fisk (secretary of The Fisk Rubber Co., of Chicopee Falls, Mass.), Max Meyer, and William G. Philippeau. Principal office, Denver, Col.

Sullivan Co., June 24, 1908, under the Rhode Island laws; capital, \$12,000. To deal in boots, shoes, and rubbers, at Providence, R. I. Incorporators: J. Joseph McElroy, Ambrose E. McElroy, and John M. Humphrey.

Rubber Import Co. of New York, July 21, 1908, under the laws of New Jersey; capital, \$25,000. Incorporators: A. S. Brunn, H. A. Schaubert, and C. Newkirk. To deal in waste rubber. Offices, Hackensack, N. J.

W. R. Thropp & Sons Co., July 21, 1908, under the laws of New Jersey; capital, \$50,000. Incorporators: W. R. Thropp, I. E. Thropp, and J. W. Thropp. To make and deal in rubber and other machinery, at Trenton, N. J.

International Automobile League, May 20, 1908, under the laws of New York; capital, \$50,000. The incorporators include Alfred C. Bidwell (No. 234 North Division street) and William Preiss, both of Buffalo, N. Y.

Rubberlife Manufacturing Co., June 12, 1908, under the laws of Michigan; capital authorized, \$30,000. Incorporators: Alfred D. Rathbone, Benjamin S. Hanchett, and Norman Bellon. Offices in Grand Rapids, Mich. The company control "Rubberlife", a filler for tires.

Fisk Rubber Co. of New York, July 6, 1908, under the laws of New York state; capital \$5,000. Incorporators: William G. Philippeau and Max Meyer, of New York city, and Alfred N. Mayo, treasurer of The Fisk Rubber Co. (Chicopee Falls, Massachusetts).

TRADE NEWS NOTES.

TYSON BROTHERS, successors to Robert E. Tyson in the manufacture of rubber substitutes, at Fairfield, Connecticut, state that they have increased their equipment and are prepared to handle promptly orders for any grade of substitute.

King & Leatherow, Limited, who began at Newark, New Jersey, early in 1900, the manufacture of seamless air and gas balloons and seamless nipples, have removed to Bloomfield, N. J., where they are established at No. 463 Bloomfield avenue.

The National India Rubber Co. (Bristol, Rhode Island) are mentioned as having received government orders for 15,000 rubber ponchos, of which 5000 are for the navy and 10,000 for the army.

A recent report was to the effect that representatives of Belgian manufacturing interests were in Woonsocket, Rhode Island, considering the purchase of the factory buildings occupied by the Woonsocket Rubber Co. before the building of the company's "Alice" mill.

The rubber goods store of Oliver R. Howe was one of several business places damaged by fire in Lynn, Massachusetts, on July 9. The stock was only partially injured, however, and the loss amply covered by insurance.

A damage suit for \$20,000 has been filed against the Boston Rubber Shoe Co. by Daniel J. Sullivan, of Malden, Massachusetts, who claims to have been injured by an explosion of oil in one of the company's factories.

The Stoughton Rubber Co. was prominently represented in the military and trades parade, on July 1, which formed a leading feature of the celebration of "Old Home Week" at Stoughton, Massachusetts.

"Get Ready for Prosperity" is the title of a readable booklet which Mr. Frederick J. Maywald, a consulting chemist, of No. 89 Pine street, New York, is sending out to rubber manufacturers. If one should be overlooked, the gentleman named will be pleased to have a request for the booklet.

The Dayton Rubber Manufacturing Co. (Dayton, Ohio), have taken on the manufacture of the Fawkes airless tire, invented by Charles G. Fawkes, of Denver, Colorado, who formed a company to market it, but which came to an end through litigation. The tire has withstood the test of time creditably, and has undergone some modifications for which patents have been granted.

H. S. Cover, of South Bend, Indiana, to whom several patents have been granted on rubber goggles for the use of motorists and others, has filed a suit in the United States circuit court at Chicago against The Beckley-Ralston Co., to maintain his rights under these patents.

A new edition has been issued of the constitution and by-laws of the New England Rubber Club, together with a list of members and their addresses, revised to June 1, 1908. The membership is shown to be 238.

RUBBER FACTORY STRUCK BY LIGHTNING

THE factory of The Victor Rubber Co. (Springfield, Ohio) was struck by lightning early on the morning of June 20 and burned to the ground. The factory was located on Mad river, at Snyder-ville, outside of Springfield, and the fire was beyond control too quickly for the Springfield fire department to be of assistance. The newspapers report the loss at \$125,000, with \$60,000 insurance. The building was not owned by the company. It was erected some ten years ago by an earlier company of the same name, which failed in 1904, owing to the financial embarrassment of John S. Harshman, the first president and largest shareholder, being succeeded by the present Victor Rubber Co., incorporated July 2, 1904.

TRADE NEWS NOTES.

THE Beacon Falls Rubber Co. (Beacon Falls, Connecticut) are installing a new boiler in their factory.

The machinery of the Globe Mills Rubber Co. (Lawrence, Mass.), which company was incorporated at the end of 1904 and manufactured rubber footwear for some time, ceasing operations in the summer of 1907, was purchased by the W. C. Coleman Co. (Boston), who have disposed of practically all of it.

The employes of the brass foundry department of the Boston Woven Hose and Rubber Co. had an enjoyable outing at Lexington, Mass., on July 18.

Notices have been posted at the two factories of the Boston Rubber Shoe Co. that they will be shut down on August 5, for the annual summer vacation, and resume operation on August 27. The two factories of the United States Rubber Co. at Naugatuck, Conn., will be closed from August 8 to August 31. Meanwhile a number of repairs will be made in both factories.

American Wax Co. (No. 101 Summer street, Boston), manufacturers of insulated wire waxes, announce that they are prepared to supply upon request, with their compliments, blue prints showing plans for insulated wire saturating tanks, constructed on the principles outlined in article by Mr. Coleman on another page.

The Apsley Rubber Co. (Hudson, Massachusetts) have adopted a plan for saving water at their factory on an important scale. The plan is to conduct the water from calenders, grinders and washers to storage tanks, where it is forced into the boilers or used for other purposes on the premises.

The P. & H. Tire Co., No. 1057 Broadway, New York, announce that Norvell, Shapleigh & Co., of St. Louis, have become their distributing agents for the United States, for the entire territory, except the states of New York and New Jersey.

The Buffalo Foundry and Machine Co. (Buffalo, New York), who, besides making exceptionally large castings, are builders of vacuum drying and impregnating machinery, vacuum drum, shelf and rotatory dryers, compressors, pumps, condensers, and the Bell steam hammer, recently established a New York office at No. 143 Liberty street, having engaged Mr. H. E. Jacoby as resident engineer and manager in New York.

The Michelin Tire Co. are referred to as having had their factory at Milltown, New Jersey, in operation 24 hours a day for the past five months.

Mr. Isaac Crocker, of Providence, Rhode Island, treasurer of the Hope Rubber Co., and also of the "Crocker Rubber Stores Syndicate" of New England, tendered an outing and reception to his managers and other employes of his different stores, about thirty in number, on July 4 and 5. The affair took place at his beautiful summer residence at Glendale, New Hampshire, on the shore of Lake Winnepesaukee.

The Rubberset Brush Co. (Newark, N. J.) had a prominent display at the exhibition held in connection with the fourth annual convention of the New Jersey Master Painters' and Decorators' Association, at Asbury Park, beginning on July 22.

PERSONAL MENTION.

MR. M. SIDNEY PARRY, who was among THE INDIA RUBBER WORLD's visitors during the month, has been identified with planting interests in the Far East for a dozen years or more, and is now a director in several important rubber planting companies. Mr. Parry crossed the Pacific and the American continent, and was on his way home to England, where he will reside for most of the time hereafter. He was among the pioneers in the rubber culture in Ceylon, and later in Malaya, and is convinced that the future profits from plantation rubber will be more marked even than heretofore.

Mr. C. Edward Murray, treasurer of the Empire Rubber Manufacturing Co. and of two other rubber manufacturing companies at Trenton, is likewise quartermaster general in the military establishment of the state of New Jersey, and as such has been in attendance at the annual encampment at Camp Fort, Sea Girt, N. J., which began on July 11, with a four weeks' program.

Mr. William A. De Long has been selected to act as trustee to administer the affairs of the New York firm of Coster, Knapp & Co., stock brokers, who were put into bankruptcy on May 6, and given bond in the sum of \$50,000. The liabilities are \$1,001,550, according to the schedules. Mr. De Long retired from active business some time ago, after having been for many years active in the crude rubber trade in New York.

Mr. B. T. Morrison, treasurer of the Reading Rubber Manufacturing Co. (Boston and Reading, Mass.), has told his friends, *sub rosa*, that he intends shortly to resign his position and devote himself particularly to the care of the large property interests that have come to him, partly through inheritance.

Mr. Humphrey O'Sullivan, president of the O'Sullivan Rubber Co. (Lowell, Massachusetts), was one of the delegates from his state to the national Democratic convention at Denver, and was placed on the committee to formally notify the Hon. William J. Bryan of his nomination for the presidency of the United States.

Dr. Adolfo de Clairmont, president of the Peru-Pará Rubber Co., is consul for Peru at Toledo, Ohio, the city of his residence.

Mr. Henry C. Pearson, Editor of THE INDIA RUBBER WORLD, has been appointed chairman of the contest committee of the Massachusetts Automobile Club—one of the clubs affiliated with the Automobile Club of America—which renders him a member *ex officio* of the contest committee of the latter club, representing the Massachusetts body thereon. The national committee are empowered to "frame rules, issue sanctions, and govern speed and other competitions in the United States."

Mr. A. M. Paul, president of the Davidson Rubber Co. (Boston), returned from his summer vacation about July 20.

Herr Willy Tischbein, a director of the Continental Caoutchouc-und Guttapercha-Compagnie, of Hanover, Germany, and president of the Continental Caoutchouc Co. of New York, was a recent visitor to the United States.

Mr. Homer E. Sawyer, general manager of the United States Rubber Co., and Colonel Harry E. Converse, president of the Boston Rubber Shoe Co., are on a visit to Europe, having sailed from New York July 18 by the steamer *König Albert*.

Mr. Watson H. Linburg, president of the United and Globe Manufacturing Cos. (Trenton), has been appointed by the governor of New Jersey a member of the Delaware river bridge commission.

Vice President Lester Leland, of the Rubber Goods Manufacturing Co., will serve as acting president for the time being, owing to the death of Mr. Dale, president of the company.

The swinging hose racks invented and manufactured by H. J. M. Howard (Washington, D. C.) are largely used in the government buildings. The government printing office is equipped with 4,000 feet of No. 1 underwriters' linen hose supported on 80 Howard racks of one type. The United States treasury building is supplied with nearly 5,000 feet of similar hose, supported on Howard racks of a different design.

UNITED STATES RUBBER CO.'S SHARES.

TRANSACTIONS on the New York Stock Exchange for five weeks ending July 25:

COMMON STOCK.

Week June 27	Sales 1,515 shares	High 25 ¹ / ₂	Low 24
Week July 3	Sales 750 shares	High 24 ⁷ / ₈	Low 24
Week July 11	Sales 3,410 shares	High 26 ¹ / ₂	Low 24 ¹ / ₂
Week July 18	Sales 7,075 shares	High 28	Low 26
Week July 25	Sales 5,100 shares	High 28 ³ / ₈	Low 27 ³ / ₈

For the year—High, 28¹/₈, July 22; Low, 17¹/₂, Feb. 26.

Last year—High, 52¹/₂; Low, 13¹/₂.

FIRST PREFERRED STOCK.

Week June 27	Sales 310 shares	High 92 ⁷ / ₈	Low 92 ¹ / ₂
Week July 4	Sales 800 shares	High 93 ⁷ / ₈	Low 92 ⁷ / ₈
Week July 11	Sales 2,200 shares	High 97 ³ / ₄	Low 94 ¹ / ₄
Week July 18	Sales 2,451 shares	High 99 ³ / ₈	Low 99 ¹ / ₂
Week July 25	Sales 2,167 shares	High 97 ¹ / ₂	Low 96 ¹ / ₂

For the year—High, 99¹/₈, July 14; Low, 79, Feb. 19.

Last year—High, 106⁷/₈; Low, 61¹/₄.

SECOND PREFERRED STOCK.

Week July 27	Sales 110 shares	High 58	Low 58
Week July 4	Sales 100 shares	High 60	Low 60
Week July 11	Sales 500 shares	High 63	Low 61
Week July 18	Sales 200 shares	High 62 ¹ / ₂	Low 62 ¹ / ₄
Week July 25	Sales 400 shares	High 65	Low 64

For the year—High, 65, July 20; Low, 42, Feb. 21.

Last year—High, 78¹/₈; Low, 39.

OBITUARY NOTES.

MRS. GEORGINA DERRY CLAPP, widow of the late Charles Martin Clapp, died on July 13. Funeral services were held on July 16 at the residence in Roxbury, Massachusetts, built by her husband some years before his death in 1867. Mr. Clapp was for many years identified with the rubber industry in New England, in which he won an unusual degree of success.

MRS. JULIE M. TRUMAN, wife of Henry H. Truman, a member of the New York Stock Exchange and former mayor of Orange, New Jersey, died at her home in that city on June 25, in her fifty-sixth year. Mrs. Truman was the daughter of the late Charles Gideon Judson, of Woodbury, Connecticut, and later of New York City and Orange. For 15 or 20 years prior to 1875 Mr. Judson was in the rubber goods business in New York, being for part of that time New York manager for the Nashawannuck Manufacturing Co. (Eathampton, Massachusetts).

TRADE NEWS NOTES.

THE Sprague Electric Co. (No. 527 West Thirty-fourth street, New York) have opened a branch at Seattle, Washington, in addition to the one already maintained on the Pacific coast at San Francisco. While primarily an electrical company, the Sprague company's armored hose branch has become a very important part of their business.

W. F. Schacht, hitherto superintendent of the Elkhart Rubber Works (Elkhart, Indiana), has been elected president of the company. He is actively assisted in the conduct of the business by Secretary J. O. Waterman.

Howard Ramie Fibre Manufacturing Co., incorporated last year in New Jersey [see THE INDIA RUBBER WORLD, August 1, 1907, page 354] have begun operations through a subsidiary concern—Howard Ramie Gas Mantle Co., capitalized at \$125,000. The superiority of ramie over all other textiles for gas mantles is claimed. The company's factory is at Kenilworth, New Jersey, and the main office at No. 19 Park place, New York.

Harold Stimson, lately manager of the Ajax-Grieb Rubber Co.'s branch at Seattle, Washington, has been transferred to the New York office, as assistant to President De Lisser. Frank Lumsden, formerly of the Ford Motor Co., succeeds Mr. Stimson as manager at Seattle.

The Harburg and Vienna India-Rubber Co. (of Great Britain), Limited, was registered June 30, with £5,000 capital, to carry on the business conducted hitherto by the Vereinigte Gummiwaaren-Fabriken Harburg-Wien branch houses in London, Birmingham, and Glasgow.

NEW TRADE PUBLICATIONS.

LAMPRECHT & CO., a new firm, successors to Max Bertschinger (Zurich, Switzerland), manufacturers of soft rubber goods and representatives in Switzerland of William Warne & Co., Limited (London), have issued, under date of May, 1908, a "Catalogue Illustré" of druggists' sundries and allied goods, involving a line unusually varied and complete. The descriptive matter is printed in both German and French. [8" X 10¹/₂", 120 pages.]

J. ELLWOOD LEE Co. (Conshohocken, Pennsylvania) issue a Catalogue of Truss Department—the output of which embraces many items containing rubber. The catalogue also embraces elastic hosiery. The firm now manufacture the rubber parts of their trusses. [6¹/₈" X 9¹/₄", 64 pages.]

THE B. F. GOODRICH Co. (Akron, Ohio), in "A Book on Rubber Belting," in addition to listing a great variety of belts, give some interesting general information on this line of rubber goods, together with letters from a number of satisfied belt users. Special mention is made of belting for paper mills, mine elevators, grain elevators, oil wells, and belt conveyors. The price list includes items ranging from 7 cents to \$15.68 per foot. [5³/₄" X 8¹/₂", 40 pages.]

FIRESTONE TIRE AND RUBBER Co. (Akron, Ohio) have issued one of the handsomest trade publications of the year—"Firestone Side-Wire Tires"—designed to illustrate the great development of the modern commercial motor vehicle, and the consequent importance of the demand which has been created for rubber tires. The company omit from this extensive pamphlet any argument of their own in behalf of their tires, but instead present scores of letters from manufacturing and commercial firms using these tires on motor vehicles, with illustrations of the various types of cars. Fire apparatus is included, and more than 200 cities and towns are named in which "Firestone" tires are used on such apparatus. [9³/₈" X 12¹/₄", 32 pages.]

DAVID T. ABERCROMBIE Co. (New York) issue an illustrated catalogue of Camp Outfits which is so complete that it would seem that nothing required for an out door vacation has been overlooked. Naturally, since waterproof articles are so desirable in camp life, very many items of rubber goods are included. [5" X 7." 168 pages.]

ALSO RECEIVED.

THE Adams & Ford Co., Cleveland, Ohio=The Everstick Foothold. 6 pages.

William F. Mayo & Co., Boston=[Catalogue (No. 1, 1908), of Rubber Footwear from leading manufacturers; comprising the lots which formerly were offered each year at auction.] 40 pages.

Sprague Electric Co., New York=Flexible Steel Armored Hose. (Bulletin No. 507.) 16 pages.

Imperial Manufacturing Co., Newark, New Jersey=Pneumatic Cushion Keys for Typewriters. 4 pages.

Innerseal Manufacturing Co., Cleveland, Ohio=Innerseal Puncture Remedy [for tires]. 4 pages.

Barrett Manufacturing Co., Philadelphia=A New Tarvia Treatment. [Tarvia is a substance for treating roadways for motoring use to render them dustless.] 24 pages.

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for car-load lots, per pound—show an advance, as compared with last month:

Old rubber boots and shoes—domestic.....	73 ⁴ / ₈ @ 77 ⁸ / ₈
Old rubber boots and shoes—foreign.....	71 ⁴ / ₈ @ 71 ¹ / ₂
Pneumatic bicycle tires.....	6 @ 61 ¹ / ₂
Automobile tires.....	6 @ 61 ¹ / ₂
Solid rubber wagon and carriage tires.....	7 @ 8
White trimmed rubber.....	101 ¹ / ₂ @ 11
Heavy black rubber.....	41 ¹ / ₂ @ 43 ⁴ / ₈
Air brake hose.....	33 ⁴ / ₈ @ 4
Garden hose.....	2 @ 21 ¹ / ₄
Fire and large hose.....	23 ⁴ / ₈ @ 15 ⁸ / ₈
Matting.....	11 ¹ / ₂ @ 15 ⁸ / ₈

Review of the Crude Rubber Market.

PARA grades are quoted at lower figures to-day than at the beginning of July—the decline being more marked for Islands than for Upriver—a condition due, of course, to the relation of supply to demand. Islands fine new is about 4 cents per pound lower; we quote no change in Upriver coarse new, and prime Eastern plantation rubber is higher. Changes in other than Pará grades similarly seem to have followed no particular rule. Some African grades have advanced as much as 2 cents per pound, while Benguellas have declined 4 cents. Most lines of Centrals likewise have dropped and Assams have lost more than any other item on the list. Pará and Maniós quotations show little change from last month's figures, and the exchange rate is practically the same.

The new crop year begins with the smallest arrivals at Pará for several years past. During the first 28 days of July—the first month in the crop year—Pará received 445 tons of Islands rubber, 515 tons of Upriver, and 240 tons of Caucho—total, 1,200 tons. Complete July arrivals last year were 1,375 tons, and in 1906, 1,840 tons. Average for July for five years, 1,437 tons.

The share of Amazon rubber exports taken by New York during the last crop year was unusually small, but this condition has been offset somewhat by the shipments of Pará's from Europe to New York, which were particularly large during the past month.

It is too early to discuss the American political situation as related to business conditions. There is no evidence, however, of grave apprehension over any possible outcome of the presidential election. Fortunately only three months remain of the political campaign, by which time the result will be a matter of record and not of anticipation.

Following are the quotations of New York for Pará grades one year ago, one month ago, and July 30—the current date:

Pará.	Aug. 1, '07.	July 1, '08.	July 30.
Islands, fine, new.....	107@108	87@88	83@84
Islands, fine, new.....	none here	none here	96
Upriver, fine, new.....	115@116	93@94	91@92
Upriver, fine, old.....	117@118	95@96	94@95
Islands, coarse, new.....	62@ 63	44@45	42@43
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	90@ 91	64@65	64@65
Upriver, coarse, old.....	none here	none here	65@66
Caucho (Peruvian), sheet	71@ 72	50@51	49@50
Caucho (Peruvian), ball..	90@ 91	62@63	60@61
Ceylon (plantation), fine sheet	133@134	103@104	104@105

AFRICAN.

Sierra Leone, 1st quality	78@79	Lopori ball, prime.....	80@81
Masai, red.....	78@79	Lopori, strip, prime.....	62@63
Benguella	44@45	Madagascar, pinky.....	64@65
Accra flake.....	15@16	Ikelemba	none here
Cameroon ball.....	47@48	Soudan niggers.....	54@55

CENTRALS.

Esmeralda, sausage.....	61@62	Mexican, scrap.....	60@61
Guayaquil, strip.....	45@46	Mexican, slab.....	42@43
Nicaragua, scrap.....	50@60	Mangabeira, sheet.....	44@45
Panama	44@45	Guayule	25@26

EAST INDIAN.

Assam	72@73	Borneo	26@27
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Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine	4@50	Upriver, fine.....	4@50
Islands, coarse.....	1@50	Upriver, coarse.....	3@100
		Exchange	15 7/32d.

Latest Maniós prices.

Upriver, fine.....	\$200	Exchange	15 3/16d.
Upriver, coarse	\$200		

Statistics of Para Rubber (Excluding Caucho.)

	New York.	Total	Total	Total
	Fine and Medium, Coarse.	1908.	1907.	1906.
Stocks, May 31.....	309	61 = 370	309	287
Arrivals, June	968	416 = 1,324	726	538
Aggregating	1217	447 = 1694	1095	825
Deliveries, June	957	390 = 1,347	792	934
Stocks, June 30.....	270	87 = 347	303	191
	PARA.	ENGLAND.		
	1908.	1907.	1906.	
Stocks, May 21.....	635	605	670	1595
Arrivals, June	1220	1070	1485	987
Aggregating	1855	1675	1575	2582
Deliveries, June	1482	1595	1545	1347
Stocks, June 30.....	373	170	30	1235
				950
World's visible supply, June 30.....	2,854	2,223	2,150	
Pará receipts, July 1 to June 30.....	29,640	31,530	29,069	
Pará receipts of Caucho, same dates.....	6,650	6,340	5,620	
Afloat from Pará to United States, June 30.....	371	240	650	
Afloat from Pará to Europe, June 30.....	528	590	365	

NEW YORK RUBBER PRICES FOR JUNE (NEW RUBBER).

	1908.	1907.	1906.
Upriver, fine	88@94	108@112	123@125
Upriver, coarse	62@65	86@88	99@102
Islands, fine	84@89	104@110	119@122
Islands, coarse	43@46	61@63	65@66
Cameta	53@56	70@72	79@82

NEW YORK RUBBER PRICES FOR MAY (NEW RUBBER).

	1908.	1907.	1906.
Upriver, fine	83@94	112@116	124@126
Upriver, coarse	58@65	88@92	99@103
Islands, fine	80@90	110@115	121@123
Islands, coarse	43@48	62@67	65@71
Cameta	48@57	70@72	79@83

IMPORTS OF RUBBER AT BORDEAUX.

	Kilos.	Kilos.
1899.....	175,580	1,182,703
1900.....	230,532	1,330,480
1901.....	235,380	1,716,004
1902.....	678,000	1,516,420
1903.....	1,113,000	

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for May, 1908, and for the first eleven months of five fiscal years, beginning July 1, from the treasury department at Washington:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
May, 1908	\$83,984	\$121,343	\$320,921	\$526,248
July-April	1,141,634	1,365,616	3,123,544	5,629,794
Total	\$1,225,618	\$1,486,959	\$3,443,465	\$6,156,042
Total, 1906-07.....	1,135,116	1,682,003	3,358,459	5,575,578
Total, 1905-06.....	1,119,010	1,425,324	2,685,511	5,229,845
Total, 1904-05.....	892,232	1,135,610	2,372,757	4,355,599
Total, 1903-04.....	802,685	1,045,192	2,242,130	4,090,007

Liverpool.

WILLIAM WEDGE & Co. report [July 1]:

The *Para* during the early part of the month prices declined 1/2 per cent, but later on the market steadied, and closed at 1 1/2 per cent. The demand for the closing rates for May. The demand from the trade here has been steady, but there has been a moderate demand from America, on balance the market has been governed by speculators. Apart from this fact, there is a strong undercurrent of strength, and in view of small receipts and an anticipated further resumption of the American demand, holders of stock are quite prepared to wait, especially as money is cheap and prices considerably lower than for some years past, and further, owing to the low prices ruling, African imports for the coming season are expected to show a heavy increase.

Antwerp.**ANTWERP RUBBER STATISTICS FOR JUNE.**

DETAILS.	1908.	1907.	1906.	1905.	1904.
Stocks, May 31.....	677,577	752,014	725,251	347,104	744,415
Arrivals in June.....	4,019,093	296,779	298,358	54,691	771,334
Congo sorts.....	397,745	256,350	203,502	45,348	186,000
Other sorts.....	63,318	40,429	94,796	87,463	82,034
Aggregating.....	12,120,040	1,040,693	1,023,609	888,915	1,013,340
Sales in June.....	3,447,774	377,099	494,775	305,020	324,934
Stocks, June 30.....	684,866	971,793	618,834	382,586	680,414
Arrivals since Jan. 1.....	12,200,582	2,578,734	3,026,866	2,761,199	2,825,760
Congo sorts.....	2,257,536	2,194,878	2,313,941	2,211,067	2,317,432
Other sorts.....	348,289	384,159	713,195	550,132	508,328
Sales since Jan. 1.....	12,202,785	2,565,125	3,143,159	2,719,574	2,747,445

RUBBER ARRIVALS FROM THE CONGO.

JUNE 22. By the steamer *Albertville*:

Bunge & Co. (Société Générale Africaine) kilos	60,000
Do.....	17,000
Do..... (Société Anversoise)	28,000
Do..... (Chemins de fer Grands Lacs)	17,500
Do..... (Société Abir)	2,000
Do.....	650
Société Coloniale Anversoise..... (Cie du Kasai)	112,000
Do..... (Cie du Lomami)	3,800
Société Générale de Commerce..... (Alimaienne)	4,000
L. & W. Van de Velde.....	3,000
Total.....	249,450

Congo Rubber Exports.

EXPORTS of rubber from the Congo Free State in three recent years are officially stated as follows:

	1904.	1905.	1907.
Total rubber exports.....Kilos	5,764,644	6,108,421	6,069,876
Product of the State.....	4,830,930	4,861,767	4,656,723
VALUES.			
Total rubber exports.....francs	51,881,796	54,975,789	57,329,979
Product of the State.....	43,478,451	43,755,993	43,982,745

Exports include rubber in transit through the Free State, from the French Congo and from neighboring German and Portuguese territory.

Lisbon.**RUBBER ARRIVALS [YEAR ENDING JUNE 30].**

SORTS.	1904.	1905.	1906.	1907.	1908.
Benguella.....tons	1818	1885	1547	1600	1343
Loanda.....	609	704	579	687	789
Thimble.....	143	177	111	101	93
All other.....	66	51	74	62	42
Total.....	2936	2817	2392	2549	2267

PARA RUBBER VIA EUROPE.

	POUNDS.
JUNE 26.—By the <i>Etruria</i> =Liverpool:	
New York Commercial Co. (Fine).....	24,000
JUNE 27.—By the <i>Campania</i> =Liverpool:	
Poel & Arnold (Medium).....	10,000
Poel & Arnold (Coarse).....	11,000
C. P. dos Santos (Coarse).....	22,500
Robinson & Co. (Fine).....	4,500
JUNE 28.—By the <i>Caronia</i> =Liverpool:	
Poel & Arnold (Fine).....	52,000
A. T. Morse & Co. (Fine).....	8,500
C. P. Santos (Coarse).....	22,500
JUNE 6.—By the <i>Lucania</i> =Liverpool:	
General Rubber Co. (Fine).....	45,000
A. T. Morse & Co. (Fine).....	9,000
JUNE 6.—By the <i>Balto</i> =Liverpool:	
Poel & Arnold (Medium).....	22,500
JUNE 8.—By the <i>Yonbu</i> =Hamburg:	
W. L. Gough Co. (Fine).....	17,500
George A. Alden & Co. (Fine).....	8,500
JUNE 9.—By the <i>Orinoco</i> =Mollendo:	
New York Commercial Co. (Fine).....	5,000
JUNE 9.—By the <i>Umbria</i> =Liverpool:	
Poel & Arnold (Fine).....	56,000
C. P. dos Santos (Coarse).....	22,500
JUNE 11.—By the <i>Cedric</i> =Liverpool:	
Poel & Arnold (Fine).....	41,500

Para.

R. O. AHLERS & Co. report [June 23]:

With the news of a considerable advance in the home markets the existing supply of upriver grades has been eagerly bought up at a slight advance, and our market is now brought to a standstill on account of want of stock.

R. O. AHLERS & Co. report [July 9]:

With the increasing prices holders of *sertao* [upriver] have considerably diminished their stocks here, as well as in the consuming markets. The crop which finished on June 30 shows a deficiency of about 1100 tons against last year's receipts. Regarding the coming crop, there is every appearance that it will be an early one, and with the beginning of next month the first lots are expected from the Madeira.

We are informed by the house of Scholz, Hartje & Co. that the following partners are retiring from the firm: Frank da Costa, Arthur da Costa, Luiz da Costa and Cezar José de Figueiredo, withdrawing all capital and profits belonging to them. The remaining partners, Waldemar Scholz and Frederico Hartje, with N. H. Witt, will carry on the business as usual, with the same capital as heretofore.

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

JUNE 25.—By the steamer <i>Crispin</i> , from Manáos and Pará:					
IMPORTERS.	Fine.	Medium.	Coarse.	Canebr.	Total.
New York Commercial Co.....	22,000	12,000	17,000	67,500	119,500
General Rubber Co.....	57,400	11,000	52,200	900	122,400
Poel & Arnold.....	28,000	5,800	17,000	4,400	57,000
C. P. Santos.....	.....	.....	12,500	23,400	36,900
Ed. Recks & Co.....	1,400	.....	10,600	10,800	28,800
A. G. Morse & Co.....	.....	1,200	7,100	15,300	23,600
William E. Peck & Co.....	9,300	.....	7,000	.....	17,200
Hagemeyer & Brunn.....	7,100	.....	7,300	.....	14,400
Total.....	126,100	31,100	133,100	129,300	419,600

JUNE 23.—By the steamer <i>Aire</i> , from Pará:					
G. Amsinck & Co.....	13,700	3,500	39,200	.....	56,400
L. Johnson & Co.....	33,400	8,600	1,000	.....	43,600
Total.....	47,100	12,100	40,800	.....	100,000

JULY 6.—By the steamer <i>Maderense</i> , from Manáos and Pará:					
New York Commercial Co.....	97,400	23,700	38,100	36,900	196,100
General Rubber Co.....	129,100	23,200	52,200	1,600	107,100
A. G. Morse & Co.....	86,000	14,400	75,800	7,400	183,600
C. P. Santos.....	50,300	8,300	8,700	40,300	107,600
Poel & Arnold.....	22,000	2,700	49,600	27,000	101,300
Hagemeyer & Brunn.....	30,300	700	9,000	.....	40,900
Edmund Recks & Co.....	3,200	300	16,500	.....	20,000
Total.....	409,300	73,300	250,800	113,200	846,600

JULY 22.—By the steamer <i>Bontface</i> , from Manáos and Pará:					
Poel & Arnold.....	141,600	36,800	90,500	7,100	276,000
General Rubber Co.....	59,100	35,000	184,000	500	280,600
New York Commercial Co.....	89,100	20,200	50,600	111,900	277,800
C. P. Santos.....	36,400	11,800	37,000	7,700	92,900
A. T. Morse & Co.....	14,100	2,500	42,000	32,400	91,000
Hagemeyer & Brunn.....	7,900	.....	24,400	.....	32,300
Ed. Recks & Co.....	7,500	1,000	11,000	.....	20,400
G. Amsinck & Co.....	.....	.....	8,100	.....	8,100
Total.....	355,700	108,200	455,400	159,600	1,078,900

JULY 20.—By the <i>Arabic</i> =Liverpool:	
C. P. dos Santos (Coarse).....	22,500
JULY 20.—By the <i>Minnehaha</i> =London:	
General Rubber Co. (Coarse).....	45,000
JULY 22.—By the <i>Campania</i> =Liverpool:	
General Rubber Co. (Fine).....	145,000
New York Commercial Co. (Fine).....	85,000
General Rubber Co. (Coarse).....	24,000
JULY 23.—By the <i>Pennsylvania</i> =Hamburg:	
New York Commercial Co. (Fine).....	15,000
Poel & Arnold (Coarse).....	11,500

OTHER NEW YORK ARRIVALS.

CENTRALS.	POUNDS.
JUNE 23.—By the <i>Advance</i> =Colon:	
Hirzel, Feltman & Co.....	10,000
G. Amsinck & Co.....	4,500
Eggers & Heimlein.....	1,500
Isaac Brandon & Bros.....	1,000
Andreas & Co.....	1,000
Meyer Hecht.....	1,000
JUNE 25.—By the <i>Crispin</i> =Ceara:	
Emile Boris.....	23,500
JUNE 25.—By the <i>Siberia</i> =Colon:	
G. Amsinck & Co.....	15,000
A. M. Capens Sons.....	8,000

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it **does not blow under cure.**

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WALPOLE, MASS.

Operates Walpole Rubber Works; Walpole Varnish Works.

WE ARE OFFERING SCRAP RUBBER AT LOW PRICES



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BUFFALO, N. Y.

WE SOLICIT YOUR INQUIRIES



MANUFACTURE

Waxes for Saturating and Finishing the Braid of all kinds of Insulated and Weatherproof Wire that will stand both the A. T. & T. Co.'s and Fire Underwriters' Laboratory Tests

IMPORTERS AND EXPORTERS

Ozokerite, Caranauba, Hydro-Carbons

American Wax Co.

Factory, South Boston

Office, 161 Summer St., Boston

Isaac Brandon & Bros.....	1,500	
Meecke & Co.....	1,500	
Suzarte & Whitney.....	1,000	
A. Santos & Co.....	1,000	28,000
JUNE 26.—By the <i>Etruria</i> =Liverpool:		
Geo. A. Alden & Co.....	7,000	
JUNE 26.—By <i>El Sud</i> =Galveston:		
Continental-Mexican Rubber Co.....	80,000	
JUNE 27.—By the <i>Panama</i> =Colon:		
G. Amsinck & Co.....	2,000	
JULY 3.—By the <i>Alliance</i> =Colon:		
G. Amsinck & Co.....	2,500	
Pemarest Bros. & Co.....	2,000	
Hirzel, Feltman & Co.....	2,000	
Roldau & Van Sickle.....	1,500	
M. Blanco & Co.....	1,000	
A. Held.....	1,000	
Bartling & De Leon.....	1,000	11,000
JULY 3.—By <i>El Siglo</i> =Galveston:		
Continental-Mexican Rubber Co.....	*55,000	
JULY 6.—By the <i>Monterey</i> =Frontera:		
E. Steiger & Co.....	11,500	
Harburger & Stack.....	4,500	
H. Marquardt & Co.....	1,500	
E. N. Tibbals Co.....	1,000	18,500

JULY 6.—By the <i>Verdi</i> =Bahia:		
New York Commercial Co.....	22,500	
A. D. Hitch & Co.....	22,500	
Poel & Arnold.....	17,000	
A. Hirsch & Co.....	13,500	75,500
JULY 7.—By the <i>Douger</i> =Galveston:		
New York Commercial Co.....	*112,000	
JULY 7.—By <i>El Valle</i> =Galveston:		
Continental-Mexican Rubber Co.....	*125,000	
JUNE 27.—By the <i>Mexico</i> =Frontera:		
American Trading Co.....	5,000	
E. Steiger & Co.....	3,500	
Harburger & Stack.....	3,500	
E. N. Tibbals & Co.....	3,500	
Scholtz & Marterest.....	1,000	16,500
JUNE 27.—By the <i>Ceinfuegos</i> =Tampico:		
New York Commercial Co.....	*55,000	
H. Marquardt & Co.....	*3,500	
Flint & Co.....	*3,500	62,000
JUNE 29.—By the <i>St. Paul</i> =London:		
Poel & Arnold.....	7,000	
JUNE 29.—By the <i>Comus</i> =New Orleans:		
A. N. Rotholz.....	11,500	
A. T. Morse & Co.....	6,000	17,500

JUNE 30.—By the <i>El Cid</i> =Galveston:		
Edward Maurer.....	*30,000	
Continental-Mexican Rubber Co..	*30,000	60,000
JULY 2.—By the <i>Caronia</i> =Liverpool:		
A. W. Brunn Co.....	11,500	
JULY 2.—By the <i>Croole</i> =New Orleans:		
A. N. Rotholz.....	4,500	
Eggers & Heinlein.....	2,500	7,000
JULY 8.—By the <i>Finance</i> =Colon:		
Meyer Hecht.....	1,500	
Isaac Brandon & Bros.....	1,000	
American Trading Co.....	1,000	3,500
JULY 9.—By the <i>Orinoco</i> =Colombia:		
Kunhardt & Co.....	3,000	
Isaac Brandon & Bros.....	2,500	
Eggers & Heinlein.....	1,500	
G. Amsinck & Co.....	1,500	8,500
JULY 10.—By <i>El Alba</i> =Galveston:		
Continental-Mexican Rubber Co..	*27,500	
Edward Maurer.....	*22,500	50,000
JULY 10.—By the <i>Merida</i> =Frontera:		
E. Steiger & Co.....	4,500	
Harburger & Stack.....	3,500	
American Trading Co.....	2,000	
Graham, Hinkley & Co.....	1,000	11,000

GUAYULE

WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean. .



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

JULY 11.—By the <i>Bayamo</i> =Tampico: Edward Maurer.....	*75,000	JULY 6.—By the <i>Minnetonka</i> =London: Robinson & Co.....	5,500	JULY 21.—By the <i>Ocean</i> =London: Poel & Arnold.....	*4,500
JULY 11.—By the <i>Esperanza</i> =Colon: Isaac Brandon & Bros.....	4,500	JULY 6.—By the <i>Vaderland</i> =Antwerp: Poel & Arnold.....	22,500	*Denotes plantation rubber.	
Hirzel Feltman & Co.....	3,500	A. T. Morse & Co.....	5,500	GUTTA-JELUTONG.	
G. Amsinck & Co.....	1,000	JULY 8.—By the <i>Lincoln</i> =Hamburg: A. T. Morse & Co.....	22,500	JULY 3.—By the <i>Baltic</i> =Liverpool: Kurtz & Wolff.....	135,000
JULY 15.—By the <i>Cablen</i> =Bahia: Poel & Arnold.....	50,000	George A. Alden & Co.....	23,500	JULY 10.—By the <i>Tudor Prince</i> =Singapore: Heabler & Co.....	225,000
A. D. Hatch & Co.....	35,000	General Rubber Co.....	11,500	Poel & Arnold.....	100,000
J. H. Rosbach Bros.....	22,500	W. L. Gough Co.....	1,500	Robinson & Co.....	110,000
New York Commercial Co.....	13,500	JULY 9.—By the <i>Adriatic</i> =Bordeaux: A. T. Morse & Co.....	11,500	George A. Alden & Co.....	110,000
A. Hirsch & Co.....	6,500	JULY 9.—By the <i>Umbria</i> =Liverpool: A. T. Morse & Co.....	11,500	M. J. Jochimsen.....	100,000
JULY 15.—By the <i>Augustus Wilhelm</i> =Colon: A. Santos & Co.....	1,500	General Rubber Co.....	9,000	W. L. Gough Co.....	55,000
G. Amsinck & Co.....	1,000	Livesey & Co.....	1,500	Walter & Smidhe.....	55,000
Otto Gerlau Co.....	1,000	JULY 11.—By the <i>Agata Fel</i> =Hamburg: A. T. Morse & Co.....	22,500	JULY 11.—By the <i>Sikh</i> =Singapore: Heabler & Co.....	135,000
JULY 17.—By the <i>Maria Castle</i> =Vera Cruz: American Trading Co.....	2,000	Poel & Arnold.....	7,000	George A. Alden & Co.....	210,000
E. Steiger & Co.....	1,500	W. L. Gough Co.....	9,000	GUTTA-PERCHA.	
Graham, Hinkley & Co.....	1,500	JULY 14.—By the <i>Meamba</i> =London: Joseph Cantor.....	7,000	POUNDS.	
George A. Alden & Co.....	1,000	JULY 14.—By the <i>Zeeland</i> =Antwerp: Poel & Arnold.....	60,000	JULY 20.—By the <i>Minchaka</i> =London: Robert Sultan Co.....	22,500
E. W. Tibbals & Co.....	1,000	A. T. Morse & Co.....	75,000	JULY 23.—By the <i>Peddydiana</i> =Hamburg: Robert Sultan Co.....	10,000
Harburger & Stack.....	1,000	George A. Alden & Co.....	20,000	JUNE 20.—By the <i>Pretoria</i> =Hamburg: Robert Sultan Co.....	2,500
JULY 20.—By the <i>Mangavillo</i> =Tampico: Edward Maurer.....	*220,000	Rubber Trading Co.....	8,000	BALATA.	
Isaac Kubie & Co.....	4,500	Joseph Cantor.....	7,000	JUNE 20.—By the <i>Coppinam</i> =Tinidad: Middleton Co.....	3,500
H. Mayquardt & Co.....	2,500	W. L. Gough Co.....	35,500	JUNE 20.—By the <i>Pretoria</i> =Hamburg: Earle Brothers.....	2,000
J. A. Kendall.....	1,000	JULY 10.—By the <i>Carmatia</i> =Liverpool: General Rubber Co.....	50,000	JUNE 30.—By the <i>Minneapolis</i> =London: H. A. Gould Co.....	4,500
JULY 21.—By the <i>El Cid</i> =Galveston: Continental-Mexican Rubber Co.....	*33,500	JULY 20.—By the <i>Minchaka</i> =London: W. L. Gough Co.....	3,500	JULY 6.—By the <i>Minnetonka</i> =London: Rubber Trading Co.....	11,500
JULY 16.—By the <i>Campana</i> =Liverpool: J. H. Rosbach & Bros.....	18,000	JULY 21.—By the <i>Noerdam</i> =Rottterdam: Weise & Co.....	11,500	JULY 10.—By the <i>Parima</i> =Demerara: George A. Alden & Co.....	2,500
JULY 18.—By the <i>Adriatic</i> =Colon: Meyer Hecht.....	7,000	JULY 22.—By the <i>Gothland</i> =Antwerp: Robinson & Co.....	22,500	JULY 16.—By the <i>Tahisman</i> =Ciudad Bolivar: G. Amsinck & Co.....	75,000
G. Amsinck & Co.....	5,000	Joseph Cantor.....	17,000	Kunhardt & Co.....	12,000
W. R. Grace & Co.....	3,000	Rubber Trading Co.....	1,000	J. A. Paul & Co.....	2,500
Schulte & Goshen.....	2,500	JULY 22.—By the <i>Campana</i> =Liverpool: General Rubber Co.....	50,000	JULY 20.—By the <i>Minchaka</i> =London: Rubber Trading Co.....	5,500
Piza Nephews & Co.....	2,000	George A. Alden & Co.....	13,000	JULY 23.—By the <i>Guana</i> =Demerara: Trame & Co.....	5,500
Hirzel, Feltman & Co.....	2,000	JULY 23.—By the <i>Pennsylvania</i> =Hamburg: A. T. Morse & Co.....	4,500	JULY 23.—By the <i>Bordeaux</i> =Havre: George A. Alden & Co.....	11,500
J. R. Morse & Co.....	1,500	George A. Alden & Co.....	5,000		
Roldau & Van Sickle.....	1,500	EAST INDIAN.			
Mecke & Co.....	1,500	POUNDS.			
Pablo Calvet Co.....	1,000	JUNE 23.—By the <i>Lindenfels</i> =Colombo: A. T. Morse & Co.....	*17,000		
Demarest Bros. & Co.....	1,000	JUNE 20.—By the <i>St. Paul</i> =London: Poel & Arnold.....	*28,000		
L. Johnson & Co.....	1,000	A. T. Morse & Co.....	*9,000		
JULY 21.—By the <i>Zulu</i> =Maracaiho: G. Amsinck & Co.....	2,500	JULY 30.—By the <i>Minneapolis</i> =London: General Rubber Co.....	14,000		
JULY 21.—By the <i>Pennysen</i> =Bahia: Poel & Arnold.....	11,500	JULY 6.—By the <i>Kasemba</i> =Colombo: A. T. Morse & Co.....	*5,000		
New York Commercial Co.....	11,000	JULY 6.—By the <i>New York</i> =London: Poel & Arnold.....	*11,500		
A. D. Hatch & Co.....	11,500	Livesey & Co.....	2,000		
L. Johnson & Co.....	1,500	JULY 10.—By the <i>Tudor Prince</i> =Singapore: Heabler & Co.....	40,000		
JULY 23.—By the <i>Atrato</i> =Colouette: G. Amsinck & Co.....	11,000	Otto Isenstein & Co.....	22,500		
Isaac Brandon & Bros.....	2,500	JULY 13.—By the <i>St. Louis</i> =London: Poel & Arnold.....	*11,500		
Henry Maurer & Co.....	1,000	A. T. Morse & Co.....	5,500		
Seanz & Co.....	1,000	JULY 14.—By the <i>Mescha</i> =London: Robinson & Co.....	*45,000		

*This sign, in connection with imports of Centrals, denotes Guayule rubber.

AFRICANS.

JUNE 26.—By the <i>Etruria</i> =Liverpool: General Rubber Co.....	107,000	JULY 10.—By the <i>Tudor Prince</i> =Singapore: Heabler & Co.....	40,000	JULY 13.—By the <i>St. Louis</i> =London: Poel & Arnold.....	*11,500
JUNE 27.—By the <i>Pretoria</i> =Hamburg: A. T. Morse & Co.....	34,000	Otto Isenstein & Co.....	22,500	A. T. Morse & Co.....	5,500
General Rubber Co.....	13,500	JULY 13.—By the <i>St. Louis</i> =London: Poel & Arnold.....	*11,500	JULY 14.—By the <i>Mescha</i> =London: Robinson & Co.....	*45,000
George A. Alden & Co.....	2,500	A. T. Morse & Co.....	5,500	Earle Brothers.....	2,500
JUNE 27.—By the <i>Campana</i> =Liverpool: Poel & Arnold.....	11,500	JULY 14.—By the <i>Zeeland</i> =Antwerp: Rubber Trading Co.....	*11,500	JULY 14.—By the <i>Zeeland</i> =Antwerp: Rubber Trading Co.....	*11,500
H. A. Gould Co.....	5,500	JULY 15.—By the <i>Sikh</i> =Singapore: Otto Isenstein & Co.....	20,000	JULY 15.—By the <i>Sikh</i> =Singapore: Otto Isenstein & Co.....	20,000
General Rubber Co.....	5,500	JULY 20.—By the <i>Minchaka</i> =London: A. T. Morse & Co.....	*5,500	JULY 20.—By the <i>Minchaka</i> =London: Robinson & Co.....	5,500
JUNE 30.—By the <i>Finland</i> =Antwerp: Poel & Arnold.....	11,000				
JUNE 30.—By the <i>Minneapolis</i> =London: W. L. Gough & Co.....	5,500				
Robinson & Co.....	5,500				
JULY 2.—By the <i>Caronia</i> =Liverpool: General Rubber Co.....	30,000				

PARA EXPORTS OF INDIA-RUBBER, JUNE, 1908 (IN KILOGRAMS).

NEW YORK.					EUROPE.						
EXPORTERS.	Fine.	Medium.	Coarse.	Cauch.	TOTAL.	Fine.	Medium.	Coarse.	Cauch.	TOTAL.	TOTAL.
Schrader, Gruner & Co.....	11,004	1,308	33,117	205	45,784	71,008	5,100	1,391	20,885	108,374	154,158
Gordon & Co.....	73,353	11,543	75,580	.....	160,476	55,522	4,088	.....	7,214	67,808	108,344
E. Pinto Alves & Co.....	33,400	340	40,920	.....	74,750	63,240	.....	47,100	.....	110,400	185,180
Adelbert H. Alden.....	44,368	13,571	34,244	60,397	152,610	13,430	1,390	.....	.....	14,790	167,400
Scholz, Hartje & Co.....	25,725	5,754	43,973	6,540	81,992	26,170	5,087	6,072	37,613	73,851	155,843
De Lagotellerie & Co.....	36,888	4,064	37,045	12,210	91,107	.....	.....	.....	.....	.....	91,107
L. Marques & Co.....	4,500	340	21,450	.....	26,380	24,480	2,800	34,980	.....	62,350	88,730
Mello & Co.....	35,087	8,840	1,580	.....	49,407	7,402	2,103	50	19,890	50,952	50,952
R. Suarez & Co.....	.....	.....	.....	.....	.....	30,802	50	150	.....	30,980	48,100
Pires, Teixeira & Co.....	0,800	.....	7,260	.....	17,120	15,470	.....	15,510	.....	30,980	34,318
Sundry small shippers.....	6,511	1,657	19,620	.....	27,788	3,430	.....	3,300	.....	5,054	5,054
Itacotiara direct.....	.....	.....	.....	.....	.....	3,337	.....	1,485	1,132	5,954	5,954
Manaos direct.....	129,880	42,852	80,110	142,323	395,174	79,300	37,826	24,037	150,300	201,505	680,730
Iquitos direct.....	.....	.....	.....	.....	.....	5,029	502	3,329	230,570	245,430	245,430
Total, June.....	411,785	91,220	304,800	221,675	1,119,588	370,529	57,096	138,864	482,706	1,040,195	2,168,783
Total, May.....	731,210	153,313	526,300	545,400	1,956,232	80,354	205,001	657,880	1,589,357	3,545,580	3,545,580
Total, April.....	313,606	91,149	347,747	280,426	1,042,018	92,405	277,366	681,718	2,016,088	3,058,026	3,058,026
Total, March.....	682,575	172,105	447,252	117,301	1,419,230	1,490,730	331,270	330,802	830,052	2,803,460	4,222,762
Total, February.....	1,040,175	230,591	493,147	164,208	1,937,121	1,832,458	235,380	524,020	991,539	3,583,403	5,550,524
Total, January.....	851,402	160,204	450,210	160,837	1,622,653	1,341,043	211,060	378,900	610,237	2,547,240	4,169,902



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AUGUST 1, 1908.

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United States Rubber Imports.

FOR ELEVEN MONTHS ENDING MAY 31.

FROM—	1906.	1907.	1908.
United Kingdom.....pounds	8,082,221	9,573,493	5,937,750
Germany	3,319,700	4,201,382	2,352,305
Other Europe	8,136,107	8,558,308	6,038,608
Central America and British Honduras	1,107,391	1,003,266	853,515
Mexico	1,149,940	6,232,753	7,550,515
Brazil	28,253,754	38,064,613	29,624,760
Other South America	1,695,010	1,742,647	1,304,324
East Indies	1,787,734	2,101,897	1,139,564
Other Countries	87,999	31,071	37,773
Total	53,949,925	71,680,400	54,626,074
Value	\$42,195,242	\$55,379,907	\$32,481,724
Average, per pound	78.3 cents	78.1 cents	59.5 cents

Plantation Rubber From the Far East.

STATISTICS FOR FIVE MONTHS ENDING MAY 31.

RUBBER THE PRODUCE OF CEYLON.

	1907.	1908.
To Great Britain	pounds 115,432	144,988
To Belgium	1,089	.....
To France	17	1,054
To Germany	10,382	12,240
To Australia	790	11,543
To United States	44,479	78,695
To other countries	112	1,930
Total	173,210	250,450

RUBBER FROM MALAYA.

	Singapore.	Penang.	Total.
To Great Britain	pounds 694,533	338,207	1,032,800
To other Europe	31,407	66,933	98,400
To United States	400	.....	400
To Japan	3,333	.....	3,333
To Australia	10,166	.....	10,166
To Ceylon	85,067	33,810	118,877
Total	824,906	439,010	1,263,976
Same months, 1907	549,435	56,991	603,396

Plantation Rubber in London.

JUNE 26.—About 37 tons Straits and 4 tons Ceylon offered at to-day's auction, less than half the amount finding buyers. Sales at an irregular advance of 1d. @ 11½d. per pound over auction prices a fortnight ago. Fine sold at 4s. up to 4s. 4¾d. [=£1.07], with hard fine Pará at 3s. 10¾d. [=94¾ c.]. Fine plantation one year ago sold up to 5s. 7½d. [=£1.36¾]. Gow, Wilson & Stanton, Lim., report of to-day's sale: "The most interesting lot catalogued was a consignment of 200 cases (10 tons?) of fine block from Lanadron estate (Messrs. Pears); this, however, was withdrawn from auction; the seller's limit of about 4s. 6d. [=£1.09½] per pound net being obtainable in the room.

JULY 3.—No auctions this week. Lewis & Peat report that the market has been firm during the week, with considerable sales, including fine hard Pará at 3s. 11d. to 3s. 11½d. [=96¼ cents]. In plantation Pará not much doing. Small sales of biscuit and sheets up to 4s. 2½d. [=£1.02 1/3], and of fine block at 4s. 4d. [=£1.05½].

JULY 10.—At to-day's auctions, of 521 packages of Ceylon and Straits plantation 383 found buyers at an advance of 2d. to 3d. on last auction sales. The finer qualities were in good request, the highest price of the sale, 4s. 8d. [=£1.13½] being paid for Warriapola estate pale biscuits. Ellakande pale crepe coming next with 4s. 7½d. [=£1.12½], the quotation for sheet and biscuits being 4s. 3½d. to 4s. 3¾d. [=£1.04.0] per pound. Pressed "rambong" (Ficus) sheet from Java fetched 3s. 0½d. [=74 cents]. The price of rubber now stands at the highest point touched since October, 1907, and hard fine Pará is about 1s. 3d. above the lowest price recorded in February of 2s. 9d. [=66½ cents per pound].

JULY 17.—Small sales privately at about rates last auction. No auction this week.

Rubber Receipts at Manaus.

DURING June and twelve months of the crop season for three years [courtesy of Messrs. Scholz & Co.]:

	1908.	1907.	1906.	1907-8.	1906-7.	1905-6.
Rio Purus-Acre.....tons	83	102	249	8,930	8,357	6,970
Rio Madeira	57	194	148	3,099	3,514	2,972
Rio Juruá	141	65	245	4,337	4,894	3,988
Rio Javary-Iquitos	18	126	21	2,524	2,978	2,866
Rio Solimoes	3	7	16	1,137	933	1,058
Rio Negro	12	17	35	608	632	702
Total	314	511	714	20,554	21,308	18,554
Caucho	483	339	482	6,310	5,467	5,099
Total	797	841	1,196	26,864	26,775	23,653
For shipment from						
Manaus	735	732	912	20,143	19,837	18,212
Pará	62	109	284	6,719	6,938	5,441
Total	797	841	1,196	26,864	26,775	23,653

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SEPTEMBER 1, 1908.

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THIS MONTH AT OLYMPIA.

AT the London rubber congress this month the manufacturers of rubber goods will have an opportunity to meet a number of important producers of crude rubber—a fact which represents the most important step in progress made in connection with rubber for many years. It marks the beginning of direct relations between grower and consumer—the production of definite qualities of rubber on specifications—the establishment of a fixed reputation for the product of given estates, protected by registered trade marks—all of which are desirable. All of this will not happen at once, of course, but every business development must have a beginning before it can become general, and we look to many new things in rubber to date from the Olympia exhibition.

It is not so long since the arrival of crude rubber in market was so irregular and uncertain as to be almost a matter of chance. A sailing vessel would come in without warning, with consignments of rubber of which perhaps no advices had been given, and a broker went out and found buyers at what it would bring. That was the practice in America; in London a more stable tone was given to the market by the auction system, which still obtains. To-day shipments are more regular, and more prompt, steam hav-

ing succeeded sail, and the telegraph gives notice in advance of all details, making possible the systematic business which has grown up of rubber importing.

Still the buying of crude rubber has remained very much a lottery. The consumer and the producer have had no relation; even the importer or merchant, as a rule, have not come into contact with the producer, so that any attempt to fix rubber prices six months ahead was about as uncertain as a weather prophecy. The more advanced plantations in Malaya, for example, have now reached a position where, knowing the actual cost of production, and being able to guarantee quality, they could contract to supply rubber at a fixed price for any length of time, if they chose to do so. But even if such a system does not prevail in the near future, there are other advantages which may be expected to follow the closer acquaintance of planters and manufacturers, and of planters with the suppliers of plantation requisites, such as will be promoted by the International Rubber Exhibition.

The general public is likely to be benefited by the wider dissemination of facts about rubber, as a result of the exhibition, which ought to render more difficult the flotation of unsound companies. It is desirable that the public should invest in rubber, as in any other good business, and this new field of investment ought to be so safeguarded that none need be afraid to deal with it. This, evidently, is one of the objects of the exhibition at Olympia to which the management is applying itself, rather than any idea of making any profit from the exhibition as a business enterprise.

RAILWAYS IN AFRICA AND RUBBER.

THE rubber world has more than one reason for feeling interested over the activity in railway building in Africa which is being promoted by every European power having colonies on that continent. African railways already have made available large rubber areas which, otherwise, might yet be unproductive. Practically all the rubber exported from the Congo Free State is conveyed over the railway around the Congo Falls, which road has otherwise favorably affected the rubber interest by facilitating in so many ways the development of trade in the Congo rubber area. Similarly rubber trading has felt the beneficial effect of the railways in French West Africa and British East Africa. And it may be added that one of the incentives to the further construction of railways in the Congo State and of the Benguela line is the prospective profit from opening new rubber fields.

The carriage of rubber alone, however, in none of the regions indicated, would be sufficient to maintain a railway. But the promoters of these African roads are building for the future—to accommodate a traffic the development of which has barely begun. Just as,

in the western United States, prosperous millions now live in areas which were practically deserts before railways were projected through them, the hope is entertained that planting, farming, and grazing, as well as mining will be very largely developed in Africa, by or under the direction of white men, after the railways now planned shall have made more of the interior accessible.

Not the least promising hope in respect of the new Africa is that cotton will be produced there in large quantities. Already the adaptability for cotton growing of Lagos, Togo, and other colonies has been demonstrated—soil, climate, and native labor all included—but the lack of transportation facilities has been an insuperable obstacle. By the way, the fact that cotton growing has been attempted in so many parts of the world where it has not yet proved successful does not mean that cotton cannot yet be produced in them when they have been further developed through better transportation facilities. The world is using more cotton every year, and every increase in the amount produced is of interest, particularly if the rate of increase promises a lower level of cotton prices. It is possible that Africa as a cotton producing country will yet become as interesting to the rubber trade as it is now in the production of rubber.

Finally, the modernization of Africa in any respect whatever tends to increase the demand for rubber goods on that continent, and railways will tend, as nothing else can, to the new development.

A HELP TO BUSINESS.

WE have ever deprecated the idea of depending upon the government to create business. No matter how much international treaties may facilitate business by removing obstacles to intercourse, no treaty ever made sold a bushel of wheat or secured an order for a sewing machine. Mr. Blaine's pet scheme of reciprocity with the South American republics read well when written into the statutes but, as *THE INDIA RUBBER WORLD* pointed out at the time, it only afforded an opportunity for trade which our merchants might take advantage of or ignore as they saw fit, and before most of them seemed to recognize its existence the law became ineffective through a revision of the United States tariff which was the result of a political game played by people not interested in commerce and knowing nothing of South America.

The tariff has been much overrated as affecting international trade. Its actual service, in large part, has been as a safe basis for domestic political discussion just before elections—something over which people could be aroused sufficiently to keep them from forgetting to go to the polls. Regardless of high tariffs or low, some American firms have grown wealthy in

the export trade and more firms abroad have become wealthy by selling in the United States—even selling highly protected goods in towns where large factories were making competing goods.

Trade depends upon the merchant more than upon treaties and tariffs. Certainly the merchant who makes no attempt to secure orders abroad will not shine as an export merchant. But if he does engage in export trade he is supposed to wish to be qualified for it, and to be ready to make use of every agency that can be brought into his service. There is no inconsistency in our assertion that it is futile to depend upon the government to make business, and the suggestion that the government can be made use of in many ways to further business. The consular service, for example, can be made very helpful to commerce—not by the action of the government, necessarily, but by the use which the business world may make of the service.

From the earliest days that nations sent agents abroad to look after their seamen, vessels, and merchandise, the consular service, in one way or another, has been of definite advantage to commerce. To-day the scope of the service has broadened until consuls are engaged in advising their governments of every form of development and progress in the countries to which they are sent, and in pointing out opportunities for trade. It is true that the average consul not so long ago was just as apt as not to owe his appointment to his being a nuisance at home, and the idea prevailed that if he proved a nuisance in some out of the way foreign port the foreigners could do the worrying. But now the government, without regard to party politics, is seriously working to build up a consular service which shall be composed of men qualified for their work, who shall have an incentive to devote their best energies to it, with the idea that the interests of trade shall be promoted as far as possible.

The benefits derived, however, are measured by the degree of interest shown by our merchants and the effort made to take advantage of information gained by the consuls. We doubt whether it is generally known how valuable are the daily consular reports now printed at Washington, despite the fact that their contents are in such large part the result of accidental observations made by consuls, and often without an idea of what is actually wished for in business circles at home. Of course, the official representatives of the government cannot be sent to Brazil or Burma with samples and order book in hand to sell goods, but they can be informed as to what American goods are suited for those countries, or what classes of manufacturers are in a position to do business there, and utilize this knowledge in making their reports.

The ideal conditions would involve such relations between commercial associations and the government as would enable the consuls to make such reports that

no house having an interest in foreign trade would think of doing business without them. There are indications that sentiment at Washington is favorable to such a relation between business and the government. Steps have been taken to encourage business men to cooperate with the government in the improvement of the consular service. There are not a few consular officers who are working earnestly to improve the service, and we doubt not that if business men more generally signified an interest in such matters the consular reports would be still further improved.

An indication of progress worth noting here is that some capitalists have responded freely to a call for funds for founding a chair in a school at Washington for the training of men for consular work, and it is encouraging to see that the daily press has commented favorably upon the movement.

THE MODERNIZATION OF RUSSIA.

SOME of our exchanges have devoted considerable space of late to discussing the question whether a certain Russian firm in the rubber trade has been "bought" by another and larger firm. After all that has been said it would appear that the smaller concern has not been "sold" to the larger, the proof of which is that the founder of the firm—the man who gives name to it—is still doing business at the old stand. If he had sold out his business he would not now occupy the old desk or still be "bossing" the office staff.

All this discussion may appear to some minds much ado about nothing, but, after all, it is just as well to get at the facts about such matters. What has happened in Russia is a "merger" of important rubber interests. A, B, and C, each with an established position in the trade, each doing some one thing better than anybody else, agree not to waste energy by each trying to excel in every department—not to try to get more business by killing off the others—but to come to an understanding whereby each will be free to develop to the utmost the specialty for which it is best fitted. Actuated by this spirit, each concern helps all the others, with the idea that the total resulting profit will be larger than the aggregate in the past, without necessarily placing any new burden upon the consumers. Nobody's business has been "bought" or "sold"; former competitors have ceased to try to kill each other, but are working together for the general good of the trade, with the idea that what is best for the whole will benefit each and every unit of which it is composed.

Russia is not the first country in which rubber manufacturing companies have "merged," and we take it that the principle involved there is the same as elsewhere in matters of this kind. If it isn't, the industry will go to pot, giving an opportunity for new concerns, based upon a better foundation, to occupy the field. Meanwhile there is no reason for worry; what the people want is

good goloshes at fair prices, without regard to whether this or that shop has been "bought" or "sold."

FURTHER EVIDENCE OF THE GROWTH OF BERLIN, as well as of the disposition of the biggest cities everywhere to attract to themselves the lion's share of what is good in their respective countries, is to be seen in the removal to the German imperial capital of the estimable *Gummi-Zeitung*, so long identified with Dresden.

THE USE OF THE WORD "RUBBER" apparently is becoming more general among Dutch speaking people, whatever may be true elsewhere. In the editorial pages of Hollandish journals, and in their advertisements as well, "rubber" appears without any explanation or excuse. Why shouldn't it? Rubber is no more a foreign word there than "caoutchouc," while the use of the shorter word puts one in touch with a greater share of the world's population than caoutchouc or any other synonym. Even if the word is followed by *maatschappij* or *Tentoonstelling*, the use of "rubber" is an indication of progress which should be welcomed.

ALL THE NEWS CANNOT BE GOOD NEWS, even in the best newspaper. At least all cannot be pleasant news. On another page is a report of the indictment of two officers of what purported to be a rubber plantation company, charged with gross misrepresentations made in order to attract investors. We have no comment to make beyond noting that some fraudulent concerns spring up in every business, and to say that their worst feature is that they appeal to that class of the population who can least afford to be swindled. The prospectus of the company referred to offered shares, or "bonds," at \$300, to be paid for in installments during five years, the investor meanwhile to be entitled to dividends aggregating \$382. In other words, you get the bonds for nothing, plus \$82 in cash, after which you are, without any further payment, a full pledged shareholder in a rubber plantation yielding profits so vast—well, the figures are not fit to print! Of course, no business man was ever asked to buy such stocks, and it may be "good news" after all that the government attempts to protect the weak-minded by assuming that such prospectuses are necessarily dishonest.

VIEWS ON PLANTATION RUBBER.

A MEMBER of the rubber trade who has been looking into the use in the United States of Eastern plantation, sends THE INDIA RUBBER WORLD a note to the effect that two concerns in the insulated wire trade "would be glad to use it all the time if regular supplies could be obtained." From the rate at which the new grade of rubber is coming forward, however, it would appear that no fear need be entertained in respect of the matter of supplies. Regarding a large rubber shoe manufactory, THE INDIA RUBBER WORLD's informant remarks that "they do not care to pay the premium over South American rubber" to obtain the Ceylon product. A mechanical rubber goods company is quoted as stating that at one time they used a good deal, "but the manufactured goods did not last well." Still the consumption of plantation rubber keeps pace with the production.

A RUBBER REINFORCER.

NOT a substitute, or an adulterant, but a "reinforcer," is what George Watkinson calls "M. R." hydrocarbon, and he proves it. He got his facts through many experiments in which he took a great variety of rubber compounds, added a pound of M. R. hydrocarbon to it and got a result infinitely stronger and much cheaper. He now finds himself in a position where the trade at large are coming to his way of thinking, and it looks as if M. R. would shortly be ranked among the most notable and staple of the rubber assistants.

THE AMAZON RUBBER MOVEMENT.

THE exports of crude rubber from the Amazon region during the crop season ending June 30 were smaller than for the preceding year by some 1,000 tons, though otherwise the largest on record. The Amazon rubber exports as taken into account at Pará may be classed as follows, Pará being credited with the quantities actually shipped from there, no matter where produced. The remaining quantities were shipped direct from Manáos, Serpa and Iquitos, via Pará, to Europe or New York:

[The Figures Indicate Weight in Kilograms.]

SHIPPED FROM	New York.	Europe.	Total.
Pará	7,654,370	8,920,891	16,575,261
Manáos and Serpa.....	6,957,087	10,377,364	17,334,451
Iquitos	43,195	2,470,493	2,513,688
Total.....	14,655,261	21,777,658	36,432,919

The shipments credited to Pará this year are proportionately smaller than last year, which would indicate that a smaller share of the Acre product went to Pará for export, being handled instead at Manáos.

The rubber is classed as to grades as follows:

GRADES.	New York.	Europe.	Total.
Fine	7,085,285	11,571,000	18,656,285
Medium	1,512,737	3,135,205	4,647,942
Coarse	4,369,887	3,455,442	7,825,329
Total	13,967,909	18,161,647	32,129,556

Total..... 14,655,261 21,777,658 36,432,919

The actual exports from Manáos and Iquitos between July 1, 1907, and June 30, 1908, differ slightly, of course, from the shipments from Manáos and beyond actually passing Pará between those dates, since several days are consumed in river transit. The destination of these shipments was as follows:

	Fine.	Medium.	Coarse.	Caucho.	Total.
New York.....kilos	3,787,853	877,485	1,266,683	1,010,023	6,941,944
Liverpool	3,748,570	858,194	1,370,197	2,701,330	8,678,291
Havre-Hamburg	2,368,800	194,992	1,149,554	1,013,281	5,726,627
Total	9,905,223	1,930,671	3,786,434	4,724,634	20,346,962

Manáos shipments include the products of Amazonas state, part of the Acre territory product, and rubber in transit from Peru, Bolivia and Venezuela. The details of Iquitos (Peru) rubber passing Manáos were:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Fine	989,485				989,485
Medium	150,975				150,975
Coarse	441,818				441,818
Caucho	931,210				931,210

Total..... 2,513,488

This rubber probably shows a large proportion of "medium" on being regraded in the consuming markets.

THE YEAR'S ARRIVALS AT PARÁ.

The figures which follow relate, not to exports, as do the preceding figures, but to all the arrivals at Pará during the crop year 1907-08:

SOURCE.	Rubber.	Caucho.	Total.
Rio Purus	3,664	658	4,322
Rio Juruá	1,028	129	1,157
Rio Madeira	873	225	1,098
Manáos	68	6	74
Manáos, transit	13,155	4,175	17,330
Rio Tapajós	941	103	1,044
Rios Xingú-Jary	850	57	907
Islands	5,504	...	5,504
Cametá	2,000	...	2,000
Rio Tocantins .....	...	684	684
Peru	1,077	1,448	2,525
Total	20,160	7,485	27,645

F. W. CLEMENTS, of Melbourne, points out in *London Electrical Review* that the soiling of electric wires in household use is a source of short circuiting, as the ammonia thus set free dissolves the rubber insulation.

INDIA-RUBBER GOODS IN COMMERCE

EXPORTS FROM THE UNITED STATES.

THE following is an official statement of value of exports of manufactures of india-rubber and gutta-percha from the United States for ten fiscal years, ending June 30:

YEARS.	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
1907-08.....	\$1,347,775	\$1,614,200	\$3,743,040	\$6,705,105
1906-07.....	1,253,309	1,231,898	3,729,643	6,214,910
1905-06.....	1,221,159	1,505,082	2,060,144	5,692,385
1904-05.....	994,100	1,214,342	2,572,375	4,780,817
1903-04.....	879,476	1,086,304	2,409,750	4,435,590
1902-03.....	819,985	1,050,491	2,209,875	4,176,351
1901-02.....	634,146	1,046,315	1,781,041	3,461,502
1900-01.....	505,726	724,015	1,727,527	3,017,268
1899-00.....	541,830	420,746	1,405,212	2,367,788
1898-99.....	(a)	260,886	1,504,499	1,765,385

[a—Included in "All Other Rubber."]

SHIPMENTS TO NON-CONTIGUOUS COUNTRIES.

For the fiscal year ended June 30, 1908:

TERRITORIES	Belting, Packing and Hose.	Boots and Shoes.	All Other Rubber.	TOTAL.
Alaska	\$70,977	\$212,200	\$23,002	\$312,839
Hawaii	45,327	12,426	68,248	126,001
Porto Rico	7,930	1,219	43,553	52,702
Philippines	32,368	9,139	82,308	123,905
Total	\$162,602	\$235,044	\$217,801	\$615,447

BRAZILIAN IMPORTS OF RUBBER GOODS.

OFFICIAL statement of values (in milreis), during five calendar year. [These figures doubtless fail to include many articles embracing more or less rubber, but classified under other headings than manufactures of rubber.]

FROM—	1903.	1904.	1905.	1906.	1907.
Germany	873,250	797,664	637,826	581,451	508,902
United States	150,226	156,639	127,842	123,003	189,711
France	289,371	275,602	271,886	249,161	242,095
Great Britain	767,308	714,016	800,835	686,811	584,121
Italy	186,872	218,164	252,156	136,501	95,425
Other countries	104,237	118,677	93,837	48,110	55,496
Total.....	2,374,823	2,280,762	2,205,382	1,810,937	1,675,750

Equivalent with exchange at 12 pence for the first two years, and about 15½ pence in 1905, 1906, and 1907:

	1903.	1904.	1905.	1906.	1907.
U. S. gold	\$577,853.81	\$554,966.41	\$693,140.00	\$506,161.50	\$526,679.40
Sterling	£118,741 38	£114,038 28	£142,430 88	£116,955	£108,225 108

The Brazilian figures, as might be expected, do not correspond with the statistics of other countries of rubber exports to Brazil, owing, if for no other reason, to differences in classification. The United States report rubber goods exports to Brazil during six fiscal years (ending June 30), in value as follows:

1901-02	\$17,022	1904-05	\$51,332
1902-03	27,797	1905-06	42,080
1903-04	20,419	1906-07	50,012

THE rubber heel is now put on a good many welt shoes. The best way is to put them on by hand, as the machine will drive the nails crookedly and interfere with the heel trimming machine. Heeling machines can be used to nail on rubber heels, but to nail them on perfectly flat is yet an impossibility with the present makes of heeling machines. The rubber heel nailed on by machine will always be higher at the breast than at the rear of heel.—*American Shoemaking*.

UNLESS fire hose is likely to encounter a freezing temperature it is not necessary to perfectly drain the water out, as the rubber lining is not injured by dampness within, but on the contrary is benefited by remaining in a moist condition, and all rubber lined hose should have water passed through it at frequent intervals, to moisten the rubber.—*Eureka Directions Concerning Hose*.

The Guayule Rubber Situation.

AT no time and in no country has the production of crude rubber ever increased at such a rate as in Mexico since the exploitation of the guayule plant began there on a commercial scale. Mexican rubber has been known to commerce since the beginning of the rubber industry, and the Indians have continued year after year to carry to market the fruits of their robbery of the forest, but in recent years the amount of rubber from this source has not been considerable. In one year in the last decade—before plantations of *Castilloa* were formed—the total export of Mexican rubber was reported by the customs at 55,478 kilograms [= 122,052 pounds]. During the calendar year 1907 the Mexican export of guayule rubber alone reached 11,487,678 pounds, while during the first half of 1908 the figure was 6,050,281 pounds, or at the rate of over 6300 metric tons a year. The Amazon region never produced so much rubber in a twelvemonth before 1870, and so much has never reached the Antwerp market in any one year. Mexico suddenly has come into second rank among the rubber producing countries, Brazil remaining first.

AS THE INDIA RUBBER WORLD has told, rubber from the guayule plant has long been known. A specimen of such rubber was shown at the Philadelphia Centennial Exhibition in 1876, and a manufacturer at New York imported a shipment of the shrub, from which he extracted good rubber. Many were the attempts, for some years, to utilize the new rubber, but generally by people with limited capital or lack of business acumen, so that only failure resulted. The really successful introduction of guayule rubber came with a rush—backed by ample capital to secure the cooperation of the most capable men in every department of the work to be done, from collecting the shrubs to selling the product to rubber factories. It was brought to the notice of possible users in a practical way, and really good qualities were demonstrated so clearly that a wide demand at once sprang up.

It may seem singular to some that, whereas business depression has prevailed in Mexico during a year past, the same as else-

where, the output of guayule rubber continues to grow. Not only this, but the shipments to the United States have increased steadily, although the whole world has been told of the slump in American financial conditions and of the consequent falling off in the consumption of rubber here. Official statistics do show, indeed, a reduced total importation of crude rubber into the United States, but more Mexican rubber than ever before, and Mexican rubber is for the most part guayule. Here are the latest figures from Washington—imports for three fiscal years, ending June 30, of crude rubber:

	1906.	1907.	1908.
Total imports pounds	57,884,345	76,993,838	62,233,160
From Mexico	1,795,915	7,175,097	9,266,443

We bought less rubber last year from Brazil, less from other South America and Central America, less from Europe, less from every country save Mexico. Has guayule rubber, then become so popular?

An explanation which has been offered is that conditions in Mexico have had more to do with the case than the demand for rubber in the United States. The guayule shrub is found upon *haciendas* owned by Mexican landed proprietors, usually on a vast scale. The method of acquiring the shrub has been its purchase from the owners of the land, or the securing of options or rights to gather guayule. In any event the Mexican has considered himself entitled, under the contracts, to a regular revenue—so much per month or year. And this revenue must be paid, regardless of whether or not the guayule is collected, the factories work, or the rubber finds a market.

Since not every guayule company has been in a financial position to permit of paying the landowners and allowing the shrub to remain on the soil until wanted, the work of collection has gone on just as if there had been no panic. In fact, the financial depression made the shrub owners more insistent upon having



AN EXPANSE OF GUAYULE LAND.



A BALE OF GUAYULE SHRUB.

the money their contracts called for. At the same time some of the guayule companies, in order to meet this pressure, were obliged to turn their shrub to account as speedily as possible, and throw the product upon the market, whether prices were favorable or otherwise. This has not been true of all the companies, but the condition has been general enough to explain, in part at least, why the producers of guayule rubber have been so busy, in the face of a falling market, and why the American rubber market has taken guayule more freely than other kinds of rubber.

It may be of interest to note that a single guayule company has paid \$300,000 (gold) to one hacienda proprietor for guayule shrub which is not to be gathered until wanted, and smaller amounts to several other proprietors. Companies that are in this position, and not obliged to offer guayule rubber on a weak market, look forward to the time when the total supply of shrub will be greatly diminished, and when the price of guayule rubber, in consequence, will go up. It will be time then to utilize the shrub which they now are paying for in advance. They are confident that guayule rubber, having come into use so generally, and become known to every manufacturer, will find a definite place in the trade, for certain lines of work, at a price much above the present level.



FOUR HUNDRED TONS OF GUAYULE SHRUB.

[These bales vary in weight from 30 to 60 kilograms. That illustrated on the preceding page is much larger—probably 150 kilograms.]

It appears probable, after what has been said, that not a little guayule rubber is being held out of consumption. On the other hand, it is finding new uses. It is displacing reclaimed rubber to an extent noted already in these pages. Again, some of it has been utilized, after having been "deresinated," in the place of higher grades of rubber, which the manufacturer is thus not obliged to buy.

The table which follows has been compiled for THE INDIA RUBBER WORLD from Mexican official records. It shows the total exports of rubber for 20 fiscal years, ending June 30. Formerly only wild *Castilloa* rubber was exported, the shipments of which, in later years, probably have not increased any. The increase in efforts is due, first, to the development of *Castilloa* plantations [see THE INDIA RUBBER WORLD, July 1, 1908—page 325], and, secondly, to the large output of guayule rubber.

RUBBER EXPORTS FROM MEXICO.

Pounds.	Pounds.
1888-89..... 289,261	1898-99..... 421,494
1889-90..... 300,685	1899-1900..... 572,385
1890-91..... 202,951	1900-01..... 415,006
1891-92..... 141,203	1901-02..... 309,790
1892-93..... 122,052	1902-03..... 428,740
1893-94..... 168,026	1903-04..... 677,758
1894-95..... 189,169	1904-05..... 1,095,169

1895-96..... 182,474	1905-06..... 3,190,548
1896-97..... 142,655	1906-07..... 10,321,247
1897-98..... 192,324	1907-08..... 10,106,100

[a—Ten months ending April 30.]

While on the subject of statistics, space may be given to this unofficial estimate of the exports of guayule rubber from Mexico for the last calendar year and for the first half of 1908, showing the relative proportions taken by the United States and Europe. The preceding table, it will be noticed, takes account of fiscal years. The statement runs:

	United States.	Europe.	Total.
January-December, 1907.....pounds	9,400,000	2,500,000	11,900,000
January-June, 1908.....	6,980,000	1,830,000	8,910,000

There is one class of exports not embraced in the preceding figures—guayule shrub sent abroad to be utilized. To this class belong the entries into the United States, at Corpus Christi, Texas, reported as follows:

	Pounds.	Value.
Twelve months to June 30, 1908.....	1,187,596	\$24,613
Nine months to March 31, 1908.....	1,172,309	22,614

It will be seen that the average price at which such imports are entered is in the neighborhood of 2 cents a pound. No import duty is assessed by the United States, but the shipment of guayule shrub from Mexico is discouraged by the assessment of a small export duty. A certain amount of guayule shrub is also exported to Germany.

NEW YORK PRICES FOR GUAYULE RUBBER.

[Reported in THE INDIA RUBBER WORLD at the dates below.]

1906.	February 1.....44-45	December 1.....30-31
June 1.....35-40	March 1.....48	1908.
July 1.....35-40	April 1.....48	January 1.....32-33
August 1.....39-45	May 1.....48	February 1.....29-30
September 1.....40-45	June 1.....47-48	March 1.....25-26
October 1.....40-45	July 1.....46-47	April 1.....25-26
November 1.....40-42½	August 1.....45-48	May 1.....29-30
December 1.....44-45	September 1.....45-48	June 1.....29-30
1907.	October 1.....44-45	July 1.....26-27
January 1.....44-45	November 1.....40-	August 1.....25-26

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A Journey Through Guayule Land. By the Editor. THE INDIA RUBBER WORLD, March 1, 1907—page 173; April 1, 1907—page 205.
The Anatomical Structure of Guayule. By Alfred Dominikus. THE INDIA RUBBER WORLD, August 1, 1908—page 365.

MEXICAN GUAYULE PATENTS.

THE legal proceedings wherein Mr. William Magenau, general manager, and other employees of the National Rubber Co., at Gomez Palacio, Mexico, were charged with the infringement of patents granted to Ferdinand Ephraim, for the extraction of rubber from the guayule plant, seem to have been terminated definitely. The supreme court of Mexico has confirmed the judgment of the federal district judge at Durango, declaring the proceedings of the court of first instance at Lerdo, in the case of Ephraim vs. Magenau, to have been contrary to law and justice. The *Mexican Herald* contains this comment: "These men [Magenau *et al.*] are completely exonerated from the charges, and the fact established that their company, as well as several others of the most important rubber factories in the country, using a similar process, are entirely within their rights, and will in future be secure from prosecutions of this nature."

The defense was that the processes in use in guayule extraction have been developed in entire independence of the Ephraim patents. Ephraim, who lived formerly in California, is stated to have left Mexico.

SUIT has been filed against the Todd Rubber Co. (New Haven Connecticut), in the United States circuit court at Hartford, by the Parsons Non-Skid Co. (London), and the Weed Chain Tire Grip Co. (New York), alleging infringement of a tire chain patent.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

REFERENCE is made by the Editor in the July issue of THE INDIA RUBBER WORLD to the very limited use of turpentine in the trade now-a-days. A few barrels a year in certain varnishes evidently is the extent of its application, in spite of what has been said by non-technical writers on the

TURPENTINE AND THE RESIN INDUSTRY.

rubber industry. Of course, in the very early days of the industry it was different, turpentine being largely employed by Hancock as a solvent. I think if an actual account could be obtained of the turpentine used in British rubber works to-day the Editor's estimate would be somewhat, though not largely, exceeded. For certain manufactures where the goods are not subsequently vulcanized the solvent used is turpentine, the formula having remained in use since Hancock's time. This is the case at any rate with one firm of standing; I have no knowledge as to whether the practice is general or not. The inquiry as to the use of turpentine was put to the Editor by officials of the United States department of agriculture, which is engaged in standardizing and grading the products of the turpentine industry. I should think that a more important work is necessary, that is, the preservation of the future supply. A recent American book connected with the paint trade points out that the high price of turpentine is due to a growing scarcity owing to the falling of the trees, and it says that the time is not far distant when the paint trade will have to depend entirely upon benzine. I don't know how the increased production of turpentine in Russia, France and Spain will affect future supplies, but I should certainly think that when an article has doubled in price within a few years the country where it is mainly produced should take steps in the interests of future supply. Of course a good deal of benzine is used to-day as a turpentine substitute or adulterant, but its price seems destined to rise as the use of a less volatile spirit than petrol for motor cars becomes more general. The growing scarcity of petrol owing to the greatly increased demand has already led to the adoption of hydrocarbons of less volatility and the results are quite satisfactory. With the increase in the adoption of by-product coke ovens the production of naphtha is likely to show a great augmentation; at one of the largest iron works in England which I recently visited solvent naphtha was being produced as one of the coke oven by-products. There is no likelihood, however, of the price of solvent falling away, owing to overproduction, as it seems destined in the near future to find regular employment as a motor fuel.

A PATENT for an improved buffer, recently taken out by Mr. Christian H. Gray, of the Silvertown rubber works, has aroused

NEW BUFFER PATENT.

my interest. In order to obviate the disintegration and wear of the rubber in the ordinary buffer placed between two iron plates, Mr. Gray proposes to vulcanize the solid annular buffer to two brass plates which enclose it. Instead of brass a similar alloy or a brassed metal plate may be used. With regard to the improvement effected in a pure mechanical way I have nothing to say, but it seems to me rather curious that brass should be proposed in this connection. I may be quite wrong, but I should have thought that any copper alloy was dangerous in such close connection with rubber. I recently extracted quite a quantity of sulphide of copper from the outer layer of some vulcanized rubber which had rapidly decayed when used for a specific purpose. This was in no way connected with the patent I am referring to, of which, as I have already said, I have no knowledge or experience. It may be that a good deal depends upon the composition of the alloy; the term brass is very loosely used by engineers nowadays, and the same may be

said of gun metal which frequently contains no tin at all. On former occasions I have referred to the decrease in popularity of the rubber buffer. On locomotives it is now the general rule to use volute springs instead of the rubber buffer, and for carriage stock laminated springs of tempered steel are rapidly coming into favor.

I don't think it is going beyond the limits of this correspondence to make a brief reference to this now largely used contrivance, because rubber forms an important item in its equipment. Besides

KENNEDY'S PATENT WATER METER.

the two rubber seatings or washers, a pure vulcanized rubber ring of 1 inch or 1/2 inch diameter is used to pack the movable vulcanite piston. These meters are now being largely adopted where a water rate is levied on workshops and factories by urban authorities. They are manufactured by Messrs. Glenfield & Kennedy, of Kilmarnock, Scotland, and when in use are, as a rule, the property of the water company or urban authority whose officials keep them under supervision. Reliability of action has not always characterized the water meter of the past, but I hear nothing but satisfactory reports of the one under notice.

RUBBER IN TOBAGO.

I had a chat recently with Mr. T. M. Orde, who has been spending a holiday in Northumberland, in which county his family has been well known for many generations. Mr. Orde is connected with the West Indian Rubber Plantation Syndicate, Limited, and is full of enthusiasm as to the prospects of the *Castilla* trees under cultivation in Tobago. Hardly anything has been done in the West Indies it seems with the *Heceta*, it being considered the better policy to stick to the indigenous tree, which is expected to yield a first class rubber under proper conditions of tapping and preparation. Exactly what these conditions consist of by no means seem to be a general matter of agreement, and it is clear that much experimental work remains to be done. Mr. Orde is emphatic that over-tapping is being carried on in Ceylon, and that certain systems of tapping associated with well known names are not in the best interest of the plantations where they have been adopted. With regard to coagulation he expressed himself strongly in favor of the centrifugal machine, not in the form first proposed by Biffen, but after a method worked out by himself and associates in Tobago. The rubber so prepared and air dried has been valued by London brokers at a shade less than some of the best Ceylon qualities, but so far only very small lots have been put upon the market. With regard to the general planting situation it would seem that cocoa has been better business than rubber in the island, the price of the former reaching an unprecedented figure last year. This matter of cocoa I notice was referred to at the not very exhilarating meeting of the Kepitigalla Rubber Estates on July 27, the Ceylon planters, owing to climatic troubles, not having been able to benefit by the high prices which have ruled. There does not seem likely to be any increased amount of rubber coming forward from the native West India vine *Forsteronia floribunda*, or from the bramble *Cryptostegia* which is commonly met with in Tobago. Many large land owners in Trinidad and Jamaica are giving up the sugar business and going in for *Castilla* planting.

THE difficulties which arose as to validity of title to its property when this company was first brought out seem now to have been satisfactorily settled, and the original lease and license have been largely extended. A prospectus for the subscription of 3,608 shares, the balance of the working capital, was is-

BRITISH GUIANA RUBBER CORPORATION.

sued at the end of July, the subscription being underwritten at a commission of 15 per cent. and an over-riding commission of a shilling per share. With the prospects of the substantial dividends foreshadowed in the prospectus one would hardly have thought it necessary for Messrs. J. H. Tredale & Co., the well-known energetic stock brokers of Liverpool, to enclose a circular letter in the prospectus advising all and sundry to apply at once for shares. Such a letter is a somewhat new departure in rubber prospectuses, though the additional figures it contains over and above what are given in the prospectus are interesting. For some time at any rate it is clear that the major income will be derived from balata rather than from rubber, either forest or plantation, and in the collection of balata the corporation is presumably at no disadvantage with those gatherers outside its concession, as collection under license is the rule in Guiana. It is stated that the corporation can deliver their sheet balata in London at an inclusive cost of a shilling and that the price of 2s. 5d. per pound is being realized. According to statements from Ciudad Bolivar the collection in Venezuela is unprofitable if the London selling price falls appreciably below 2 shillings; but it would seem that the Guiana business could face a much lower price with equanimity.

As an addendum to what I said six months ago about motor transport investigation at Aldershot it is interesting to note that the War office, through the mechanical transport committee, have instituted a competition for light tractors. The trial is to take place in the Long Valley at Aldershot and the subject is looked upon in engineering circles as one of considerable importance. Whether it will be of interest to the motor tire manufacturers remains to be seen; as far as motor transport in the army has gone at present rubber tires have been limited to the lighter vehicles, such as ambulance wagons, but they are certainly applicable to the sort of tractor now to be investigated.

MOTOR TRACTORS FOR WAR SERVICE.

I HAVE received from this well-known firm of electrical cable manufacturers their annual calendar. This announcement may seem somewhat belated, but I may explain that the firm have adopted the procedure of dating their calendar from July 1 to June 30, with a detachable leaflet for each day. Although the firm make all sorts of rubber insulated cables they by no means limit themselves to this branch. In addition to the fibrous diatrine insulation, they also use bitumen as an insulator on the lines initiated by Callenders many years ago, but with their own modifications. One of the most modern and withal important applications of electricity is in connection with mining. As shaft and underground cables are frequently liable to get wet it is important that the insulation used should be absolutely waterproof, and for mining work I understand that Glovers recommend their bitumen insulation in preference to the fibrous insulation. In their patent solid three case bitumen cable the conductors are each separately insulated with bitumen compound, and after being laid together around a shaped central case of bitumen, the whole is sheathed over with a solid tube of bitumen which is forced on so as to completely fill up the interstices between the three cases. The cable is then lapped and armored as required. This class of cable seems to have given every satisfaction for pressures up to 3,000 volts. In their special type of trailing cable the conductors are insulated with rubber, and after being laid up together are sheathed with bitumen so as to form a solid mass into which water cannot penetrate.

THE freight rate on rubber from Singapore to London is 60 shillings [-\$14.00] per ton of 50 cubic feet.

IMPORTED pink shaded rubbers, for veneering, in dental work, are offered to the trade as high as \$6 per pound.

LONDON RUBBER EXHIBITION.

THE cosmopolitan character of the congress in connection with the International Rubber Exhibition to be held in London this month—from the 14th to the 26th, inclusive—is suggested by a glance at the different names applied to the undertaking by our exchanges, in various languages, in reporting on work in progress here or there in preparation for Olympia. Some of the names are:

Exposición Internacional Huleira.
Exposição de Borracha.
Exposition Internationale du Caoutchouc.
Internationale Ausstellung für Kautschuk.
Internationale Rubber-tentoonstelling.

The space reserved for Ceylon at the International Rubber Exhibition has been increased to 80 × 30 feet, or double the original allotment. The display will be under the joint auspices of the Ceylon Planters' Association and the Ceylon Chamber of Commerce. Mr. M. Kelway Bamber, government chemical analyst, will attend as official representative of Ceylon.

The Dutch commission for the rubber exposition embraces the following representatives of the rubber industry in the Netherlands: B. Bakker, director of the Nederlandsche Caoutchoucken Gutta-percha-Fabriek "St. Joris," at Ridderkerk; J. Merens, of Gebroeders Merens, rubber manufacturers at Haarlem; and J. Pompe, director of the Amsterdamsche Caoutchouc-Fabriek.

The Associação Commercial do Amazonas, at Manáos, after an existence dating from 1875, on May 28 last adopted a new constitution, and apparently has become more active in promoting commerce in its region, which embraces the most important source of native rubber in the world. The State government at Manáos has taken steps to have the rubber resources recognized at Olympia this month, and the commercial association will be represented there by Senhor Nicolaus H. Witt, who for so many years has been prominent in the Manáos rubber trade.

ATLANTIC CABLE JUBILEE.

ON August 5 occurred the fiftieth anniversary of the completion of the laying of the first Atlantic cable—from Valentia, Ireland, to Bay Bulls, Newfoundland. It was not the first submarine cable—there is yet working a cable laid seven years earlier between Dover and Calais—but the fact that it spanned an ocean, together with the large investment of capital involved, impressed the minds of millions who had not before realized the existence of this phase of telegraphy. It matters not that the cable of 1858 soon broke down, and that seven years elapsed before the Atlantic was spanned electrically with success; enough was accomplished by that first effort to convince scientists and capital of the feasibility of the idea, and an incentive was given to building submarine cables that has not yet spent its force. There are now about 247,888 miles of such cables in operation, including sixteen lines across the Atlantic alone.

The promoters of the 1858 cable are entitled to be remembered for their enterprise and public spirit no less because the line so speedily ceased to be of service. September 1—just fifty years ago to-day—was observed as a holiday in New York in honor of the cable and its builders, and the electrical interests in New York are now planning to commemorate suitably the cable jubilee during the present month.

The cable interest has stimulated, more than all else combined, the demand for gutta-percha, the use of which, in fact, has been practically monopolized for cable building. It is, of course, impossible to estimate the total consumption to date of gutta-percha for insulating cables, but it must have averaged more than 1,000 tons a year since 1858, and this is a very large figure, considering the limited area in which gutta-percha exists, and the difficulties encountered in gaining it.

India-Rubber Interests in Europe.

THE RUSSIAN AMALGAMATION.

A ST. PETERSBURG correspondent of the *Financial News* (London) remarks that "even Russia is becoming Americanized, to judge from the tendency developing of late to form Trusts." The despatch describes as an "india-rubber trust" the community of interest established lately between the two great rubber manufacturing companies at St. Petersburg and Riga. [See THE INDIA RUBBER WORLD, August 1, 1908—page 377.]. The *Financial News* reports the amalgamation with the rubber trust of the important Moscow mercantile house of C. Weyersbusch & Co., a large shareholder in which is A. Bokelmann, who also is a partner in the international banking house of J. W. Junker & Co. (Russian Bank of Foreign Trade), Moscow. Mr. Bokelmann, with his banking associates, is referred to as having conducted, with Baron Friedrich von Krauskopf, the largest shareholder in and president of the Russian American India Rubber Co., the negotiations for the transfer to the latter company of half the share capital of the "Prowodnik" company, of Riga.

For the purpose of the amalgamation, according to both the *Financial News* and the *Berlin Courier*, of Berlin, the Russian-American India-Rubber Co. have decided upon the increase of the share capital from 8,000,000 rubles [= \$4,120,000] to 20,000,000 rubles [= \$10,300,000]. Of the increase 7,000,000 rubles are required for the purchase of the "Prowodnik" shares, and it is intimated by the *Courier* that part of the new capital issue will be used for further purchases of "Prowodnik" shares. The Russian-American India-Rubber Co. had already taken over the St. Petersburg firm of Leopold Neuscheller, controlling a large export trade in Russian rubber goods, at a price stated by the *Financial News* at 2,200,000 rubles [= \$1,133,000].

The latest balance sheet of the Russian-American showed: Share capital outstanding, 8,000,000 rubles; debentures, 7,070,888 rubles; reserve fund, 4,212,839 rubles; second reserve, 3,003,800 rubles; total, 22,296,613 rubles [= \$11,482,755.70]. The dividend for 1907 was 25 per cent. on the share capital. A Russian newspaper reports that the firm style of the Russian-American company will be amended to include the word "Trigolnik," which is Russian for "triangle," of "three cornered," referring to the company's trade mark now so widely known. The trade mark is illustrated herewith. The initials in it stand for the words which form the company's name in Russian, beneath which is "St. Petersburg," in Russian, and below all the words "trade mark."



THE TRADE IN GERMANY.

REPORTS from Germany connect the important Harburg-Wien company with a new corporation, capitalized at 1,000,000 marks [= \$238,210], the object of which is to obtain rubbers of commercial value from minor plants. Every advance in crude rubber

prices tends to a further study in the utilization of new grades of rubber. Precisely such conditions led to the initial experiment with the Assian and African rubbers, which have been brought into such wide use as to greatly lessen the dependence of the industry upon Para rubber; otherwise the latter quality might now be selling at double the present figures quoted. The most recent important example in this field was the development of the Guayule rubber interest, in which work the Harburg factory just mentioned took an active share.

An exhibit which attracted no little attention at the recent ship-building exhibition in Berlin was the display of asbestos wood by Asbest- und Gummiwerke Alfred Calmon (Hamburg). An entire ship's cabin constructed of this material formed part of the exhibit. "Asbestos wood" is made with natural wood as a base, covered with the Calmon firm's patented "Eternit." It is represented as looking like natural wood, but as having the advantages of being fireproof and resisting heat and cold, while its noiselessness is referred to.

In addition to its advantages for the construction of walls and the like, portable articles made of the new material are not heavier than natural wood.

At a meeting of the directors of the Vereinigten Hanf-schlauch- und Gummiwaaren-Fabriken Aktiengesellschaft zu Gotha, the president stated that the volume of trading for the first five months of 1908 had equalled the business for the same period of 1907, and all departments of the factory were still active. The pneumatic tire factory which the company opened in the spring was fully occupied.

At a meeting of the Centralverein Deutscher Kautschukwaren-Fabriken, in Berlin, a proposition from the management of the London Rubber Exhibition that the

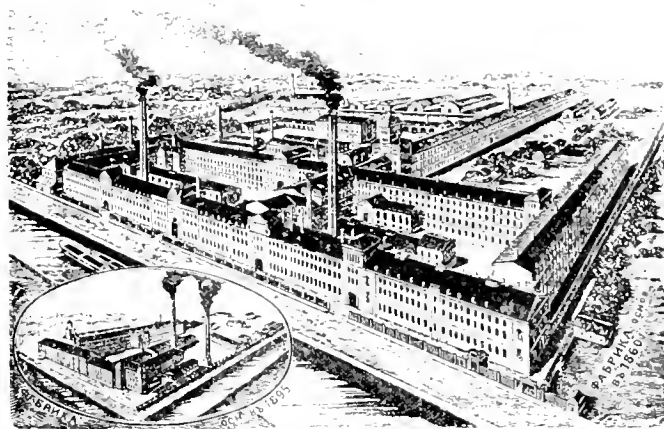
German manufacturers be represented by displays at Olympia did not meet with adoption, though supported by a communication from the Kolonial-Wirtschaftliche Komitee. The sentiment of the association was that the London exhibition was likely to result in great benefit from the standpoint of the crude rubber and planting classes, but not so much in respect of the manufacturing interests.

NOTES FROM AUSTRIA.

THE withdrawal of Josef Reithoffer's Söhne (Vienna) from the Austrian rubber manufacturers' "cartel," or price convention, will not, the *Gummi-Zeitung* hears, terminate the cartel. Our contemporary regards its continuance as desirable for the trade, from the standpoint of manufacturers and dealers alike, since without its influence the tendency is for so many new concerns to enter the trade as to make profits almost impossible.

The Vienna firm of Tischler & Co., 4, Werderthorgasse, has become Amerikanische Gummischuhniederlage Henry H. Holland. The Mr. Holland referred to is the manager of the European depot, in London, of the United States Rubber Co.

Ludwig C. Henkel, director of the Prager Gummiwaren-Fabrik, at Vysocan, near Prague, has resigned to accept the position



WORKS OF RUSSIAN-AMERICAN INDIA-RUBBER CO.

ТОВАРИЩЕСТВА РОССИЙСКО-АМЕРИКАНСКОЙ РЕЗИНОВОЙ МАNUФАКТУРЫ

[English letter equivalents for the above: TOWARITCHESTWA company; ROSSITSKO-AMERIKANSKOI Russian-American; RESINOWOL, india-rubber; MANUFACTURY, manufactory.]

filled by the late Oscar Witt, a director of the Munden-Hildesheimer Gummiwaren-Fabriken Gebr. Wetzol, A.-G., at Hildesheim, Germany. The Prague factory was founded in 1897 as an independent concern, and on going into liquidation passed under the control of Oesterreichisch-Amerikanische Gummifabrik, A.-G., of Vienna, by whom it has since been operated. Mr. Henkel is succeeded at Vysocan by Bohumil Moravec and Richard Hahn.

BRITISH COMPANY NOTES.

The directors of George M. Callender & Co., Limited, have issued a report to the shareholders, giving a version of the retirement from the chairmanship of George M. Callender, the accuracy of which is strongly disputed by Mr. Callender, who has promised to publish a reply. At a special meeting of shareholders (London, July 11), it was resolved to continue for six months under a new manager, after which another meeting will be called. The company is capitalized at £100,000 and manufacture bitumen specialties.

The profits of the General Electric Co., Limited, for the last fiscal year showed a decline of about £9,000, due to the writing down of values on raw materials in hand. The stock carried amounted usually to £300,000, composed of india-rubber, copper, and so on. The chairman expressed the opinion that no permanent improvement in the position of the British electrical industry was likely to occur while the country maintained its free trade policy. The usual yearly dividend of 5 per cent. was declared.

R. Crummaek & Co., Limited, registered in London, July 15, 1908, with £5,000 capital; to acquire the business carried on by R. Crummaek & Co., 3, Marsden street, Manchester, manufacturers of cloth for the india-rubber trade.

Neptune Rubber Co., Limited, registered in London, July 15, 1908, with £4,000 capital; to carry on the business of rubber merchants and to manufacture and deal in heels and other rubber goods. J. W. Battey, rubber manufacturer, Levenshulme, is managing director, and the offices are at Temple place, Temple street, Manchester.

Resilient Tyres, Limited, registered in London, April 9, 1908; capital, £60,000. Registered offices: 11, Ironmonger lane, E. C., London.

The business of P. Frankenstein & Sons, Limited, india-rubber and waterproof garment manufacturers at Manchester, is being continued by the brothers Simon, Louis, and Harry Frankenstein, whose father, the founder of the business, died recently in his seventy-fifth year.

The Rubber Heel Manufacturing Co., of Clayton, Manchester, whose premises were badly damaged by fire in May last, have resumed work on a good scale, manufacturing rubber heels and soles for the trade.

Mr. E. M. H. Shelley has been appointed a managing director, and Messrs. Charles Bulkeley Cutton and Spencer Brett, directors, of Gow, Wilson & Stanton, Limited, rubber and tea brokers, of 13, Rood Lane, E. C.

FRANCE.

EDOUARD MICHELIN, of Michelin et Cie., the French rubber tire manufacturers, has resigned the presidency of the Automobile Club d'Auvergne, as a protest against that club's alliance with l'Association Générale Automobile of France, one of the objects of which is the securing of automobile accessories for its members at reduced prices. The scale of discounts on pneumatic tires for Association members appeared in THE INDIA RUBBER WORLD, August 1, 1907 (page 349).

SWEDEN.

The establishment is reported of a firm at Stockholm, under the style Aktiebolaget Zakin, to manufacture an artificial rubber under the name "Zakin" patented in several countries by Zacharias O'lon [see THE INDIA RUBBER WORLD, June 1, 1907—page 268]. The capital mentioned is 420,000 kroner [= \$112,560].

THE LARGEST SOLUTION PLANT.

IT is probable that no other business in the world affords so many opportunities for the reward of individual genius as does the rubber industry. Take, for example, the rise of the Faultless Rubber Co. It was, as the whole trade knows, the creation of its president, Mr. Thomas W. Miller, and was built

on lines that the best equipped rubber men were a unit in condemning, as being neither sound nor profitable. To-day, with the biggest solution plant in the world, and with customers wherever rubber goods are used, it epitomizes opportunity in the rubber manufacture.

The plant at Ashland, Ohio, is ideally situated; it is close to the railroad, in a thrifty city of 5,000, with good water, good help, and a progressive and patriotic city government. The factory buildings are of brick and tile construction, and have about 100,-



THOMAS W. MILLER.
[President of the Faultless Rubber Co.,
Ashland, Ohio.]

000 square feet of floor space, in the aggregate.

The power plant consists of 600 H.P. in boilers and 400 H.P. in engines. There is also the usual equipment of washers, mixers, calenders, and vulcanizers, with one battery of 14 hydraulic presses, and another of 10 soon to be installed.

It is in the solution room, where there are scores of automatic dipping machines, and in the acid curing building, that the real individuality and originality of the business is shown. There are machines and devices, with special arrangement for ventilation and handling not shown to the world at large, as they were designed to fit the special lines that they so successfully produce. The company, with its \$300,000 capital, and a goodly surplus, does not aim to grow larger. It rather plans to create new and original specialties, and cut off lines that are staple and in which competition is fierce. Back of this policy, quiet, capable, inventive, an unusually shrewd judge of men and markets, stands "Tom" Miller, creator of the business.

"RUBBER HEELS AND RELIGION."

AN Irish newspaper contains a letter from a leading firm in reference to a widely published report [see THE INDIA RUBBER WORLD, May 1, 1908—page 250] to the effect that rubber heels having a metal plate of the shape of a cross are unsaleable in parts of Ireland, as being calculated to offend religious susceptibilities. The writer of the letter considers their firm as being particularly referred to as the company obliged to withdraw from trade the heels having the objectionable cruciform design, and they add: "So far from there being any difficulty in selling rubber heels of this particular pattern in Ireland, we sell more in that pattern there than any other; in fact, they have a very large sale throughout Ireland, and are extensively worn in convents and also by the priesthood."

Alum for Coagulating "Castilloa" Latex.

TO THE EDITOR OF THE INDIA RUBBER WORLD: At the July meeting of the Camara Agrícola de Palenque, nine of the fifteen rubber plantations of this district were represented.

Following a general discussion on rubber culture, mode of tapping, coagulation, etc., it was suggested and requested that the president of the Camara answer through the columns of THE INDIA RUBBER WORLD an article on "The Coagulation and Curing of Rubber" that appeared in the July number of said journal [page 320], giving the process in use by some of the companies represented in this Camara.

Mr. Elmer A. Schmidt, manager of the Rio Michol Rubber Plantation, the pioneer of this mode of coagulation here, has kindly furnished a description of his process, which I enclose.

H. H. MARKLEY,

President Camara Agrícola de Palenque,

Lumijá, Estado Chiapas, Mexico, August 4, 1908.

MR. H. H. MARKLEY, President of the Camara Agrícola de Palenque, Finca Lumijá:

DEAR SIR: I am pleased to conform with your request to give a description of the methods by which we obtained the rubber shown you and the members of our association at our last meeting. As we have used the process for nearly a year on latex of wild and also planted trees, we had opportunity for the time test also, and find the product stood it well.

As it may be interesting to know what other methods we had used, before we came to use this one, now exclusively, I will describe them in short. On this plantation, which has a big amount of wild rubber, besides the planted trees, we have been tapping continually during many years, coagulating the latex by the process known to the Indians of this district, namely the juice of a vine called "bejuco" and also "nata," and common soap or the lye of wood ashes, boiled in water. The product was not bad, but it would give out a nauseating odor when exposed to the sun, and after keeping some time would become tacky. Another inconvenience was that with the increasing need of the "nata" vine when our young rubber would come into bearing, we would have to cultivate the vine or else look for another way of coagulation. Then we tried common water, but to get results still had to use "nata" and soap. The rubber came out very clean, but the process was slow, and it would get tacky at times; perhaps, however, this was due to the varying quality of the soap obtainable here.

Eventually we got acquainted with the process used in Ceylon and tried it here, but neither the acetic acid, the formaline, nor the other chemicals used with the *Hevea* rubber gave the good results expected from them, until, by looking up the chemical properties of rubber in the good old book called "United States Dispensatory," we found alum mentioned as a coagulating agent for rubber, which we tried with the excellent result you know. The very simplicity of the process, which needs no ma-

chinery, recommends it where skilled labor cannot be obtained without high pay and difficulty. At the same time the rapidity with which the rubber is obtained is of great importance.

We use here cylindrical tanks made of corrugated sheet iron one meter [= 39.37 inches] high by 1/2 meter wide, with a faucet attached to the side, level with the bottom. Into this tank, the latex, not exceeding 10 kilos [= 22 pounds] per tank, is poured through a strainer made of mosquito screening, which retains pieces of bark and other impurities. After rinsing the strainer we fill the tank nearly to the top with water, leaving it to rest over night, and next morning the rubber will have separated sufficiently from the water, which has obtained a black-greenish tinge, and can be drawn off through the faucet, taking care that when it changes into milkish yellow, the drawing off operation to be suspended. The latex, thus cleaned from all its soluble impurities, is now poured into a vessel in which about a table-spoonful of powdered alum had been dissolved previously in about 2 liters [= 2 1/4 quarts] of water, the tank being cleansed with little quantities of water which are all poured in. The

coagulation will then be perfect and can be seen by taking a sample out with a glass when can be seen cream-like corpuscles of rubber floating towards the top.

Meanwhile, you will have spread some moist, light cotton cloth over wooden frames, fastened with spikes and pour the rubber on it, first in small quantities, gradually increasing the amount and then let it drain off. In about two hours most of the water containing the alum in solution will have run off, leaving the rubber in a soft creamy condition. This can be easily scraped off and worked with the hands into cakes in very short time. These cakes are cut into bands which are hung to dry, two days being suffi-

cient under ordinary conditions. These strings of rubber rolled up into oblong balls of from 10 to 25 kilos are then ready for shipment.

With reference to our tapping, I must say that the machete has been discarded long ago and of several instruments and tools tried, including those of the Malay States and Ceylon, we have finally adopted one which gives good result in tapping the wild as well as the planted trees. It consists of a rather wide "U" shaped steel band of the width of a bandsaw, which is fastened to a wood handle. This handle has a long set screw passing through it, regulating a steel band by forcing it away from the handle to which it is attached through screws, thereby controlling the depth of the cut and serving at the same time as a protector to the knuckles of the tapper.

We take care to set the tool shallow enough not to injure the cambium, but after the cut, which removes the bark, has been made, we have the operator run a sharp knife the length of the cut. This sets the latex flowing more freely and as it closes right away does not injure the tree by letting in air to woody portions. We have been tapping trees from 18 inches circumference to up to the biggest wild trees, with satisfactory



SEVEN-YEAR-OLD "CASTILLOA" RUBBER.

[On plantation "Iowa," near Salto de Agua, Estado Chiapas, Mexico, owned by the German-American Coffee Co., of New York. Planted 12 x 12 feet; some are 28 to 30 inches in girth, and 40 to 50 feet high.]

results with this kind of knife and can only recommend it to all who have not yet adopted and became used to another instrument.

ELMAR A. SCHMIDT,

Manager of the Rio Michol Rubber Plantation,
Salto de Agua, Estado Chiapas, Mexico, July 30, 1908.

THE use of alum in coagulation of *Castilloa* latex is not new and, of course, our friends do not suggest that it is. Indeed, it is so prompt and effective that any one wishing to show how quickly latex can be coagulated—for example, any lecturer on india-rubber—is quite apt to use that as the demonstration. There is just one danger in connection with that type of coagulation, and that is using the alum in excess, which shortens the fiber of the rubber appreciably and as a consequence makes it of less value.

The preceding communication was accompanied by a large sample of alum-cured rubber in strip form, which looks remarkably well. It is clear and dry, is possessed of remarkable tensile strength, and appears to be perfectly neutral—i. e., without exhibiting any presence of alum. Rubber of this quality would find a ready market, and bring a good price.—THE EDITOR.]

YIELD OF PLANTATION RUBBER.

THE latest report from a leading rubber planting company in the Far East mentions with satisfaction the prospect of obtaining this year 200 pounds of rubber daily from 10,000 trees. This means the tapping of 50 trees once to get 1 pound of rubber, or 50 tapplings of the same tree to get 1 pound. Two hundred tapplings in a year would be necessary, therefore, for 4 pounds of rubber per tree. It is the continuous aggregation of these small quantities that makes up the immense volume of rubber consumed every year. It may be added that the particular company referred to, working last year on such a scale as is here indicated, produced 43,000 pounds of rubber and paid a dividend of 42½ per cent.

The *Ceylon Observer* quotes Mr. Herbert Wright, formerly in the government service in Ceylon and the author of "Pará Rubber," as thus summing up his impressions of a recent visit to Ceylon after having been absent for a year or two in England: "I have been perfectly satisfied with nearly everything I have seen. I am as confident as any planter that the future success of the rubber industry is assured, at any rate from the planting side. Trees will grow, and will give large quantities of rubber; and there is an enormous acreage of land for cultivation purposes. In the future, I think, we shall probably be able to work on a basis of 250 pounds to 300 pounds per acre per annum from well planted estates, which should result in very handsome dividends, even with Pará plantation rubber at 1s. 6d. [= 30.5 cents, gold] per pound."

A rubber tree on a Ceylon plantation, now 14 years old, is reported by the *Ceylon Observer* to have yielded 14½ pounds of rubber under constant tapping for 12 months; it was allowed to rest for 15 months, and again tapped for a year, yielding 14 pounds of rubber. At the date of the report the tree had been resting again for two months, and the owner said that the latex cells were filling again.

RUBBER CULTURE IN CEYLON.

THE amount expended on rubber culture in Ceylon to date is estimated by an authority quoted by the American consul at Colombo at about \$6,000,000. The interest now requires the attention and labor of say 250 Europeans and 75,000 to 100,000 Tamil coolies.

The *Ceylon Observer* reports the return to Ceylon of George S. Brown, of Brown & Davidson, Limited (Colombo), after several months of absence in the Federated Malay States engaged in the installation of machinery for rubber plantations, which would indicate that this line of machinery is becoming very important. It is mentioned that most of the machines in question are of Mr. Brown's invention.

Ceylon papers mention the sale in Kalutara district of 122 acres planted to rubber, 2½ years old, for "close on 50,000 rupees." This would work out at \$16,221.66 (gold), or \$132.90 per acre.

Regarding Lagos rubber (*Funtumia elastica*) the report of the Ceylon royal botanic gardens for 1907 says: "Continued cultivation of this confirms the unsuitability of the tree to Ceylon, owing to the regular and severe attacks of a plague of an indigenous caterpillar, which not only completely defoliates the trees, but even attacks the tender shoots."

NOTES ON CEARA ("MANIHOT") RUBBER.

THE annual report of the Ceylon royal botanic gardens for 1907 says that 5 acres of Ceará rubber (*Manihot Glaziovii*), at the Maha-Ippalam experiment station, planted 10 × 10 feet, have done exceedingly well and made a rapid growth. At an early stage they will be tapped in a special manner by the department chemist, Mr. Kelway Bamber. It is proposed to increase the planting of this species.

The *Philippine Agricultural Review* (Manila, April, 1908) contains a report on "La Granja Modelo" (a model farm), established on Negros island by the Spanish government, and now in charge of the Philippine department of agriculture. "There is a small grove of Ceará rubber trees on the place at the present time which is producing an abundance of seed used for distribution by this bureau," says the *Review*, which contains an illustration showing the rubber to be in fine condition.

PLANTING IN SOUTH INDIA.

A WELL known planter, Mr. H. Drummond Deane, after 22 years of experience in Ceylon, is now living in South India, where he is interested in and very enthusiastic over the future of rubber planting. He reports over 7,000 acres of planted rubber in the Mundekayan district alone, and probably 6,000 acres in other parts of Travancore.

MISCELLANEOUS NOTES.

It is very doubtful if rubber can be profitably grown in the British states of Rhodesia, Transvaal, and Natal, in South Africa, in the opinion of a correspondent of London *Financial News*. He argues that the preliminary expense would be an insuperable objection, considering the higher wage scale than prevails in Ceylon and Malaya.

The *Castilloa* rubber plants at the Porto Rico agricultural experiment station, according to the annual report for 1907, have begun to seed, and the seeds have been distributed for planting. It is intended to begin experimental planting this year, though the trees are only 6 years old.

The horticultural establishment of A. Godefroy-Lebeuf (Paris) send us a catalogue of seeds of rubber producing species, which it is in position to supply in small or large quantities, ranging from *Hevea Brasiliensis* (the largest rubber tree, perhaps) to *Landolphia Thollonii*, one of the plants of the class *caoutchouc des herbes*.

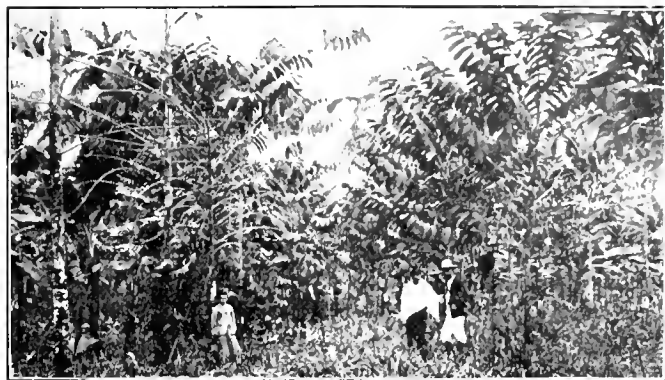
PLANTING "CASTILLOA" IN COLOMBIA.

IN an article on rubber planting in Colombia in THE INDIA RUBBER WORLD December 1, 1905 (page 75) the Choco region was described, with a map showing the location of the principal rubber plantations then existing there. Two of the planters mentioned in that article, Señor Ciceron Angel and Señor Carlos Nicolas Ferrer, whose plantations adjoined on the river Tanguí, a tributary to the Atrato from the west some 24 miles below, or to the north of Quidó, have consolidated, making a partnership under the name of Campoalegre ("joyous field").

Campoalegre, which is well equipped with administration and other buildings, and a serviceable boat landing, is devoted primarily to the growth of plantains, but the satisfactory progress made by the young rubber upon the estate encourages the proprietors to go in more extensively for this crop. The two illustrations herewith have been made from photographs taken for

THE INDIA RUBBER WORLD. The first shows one of the many seed beds for *Castilloa elastica* planted at the edge of the forest, the seedlings in this view showing five months' growth. The second picture illustrates three-year-old planted *Castilloa* trees. The shade from trees of this age causes the plantains to cease to be productive, and they are gradually exterminated by the rubber.

Campoalegre contains some 4000 planted rubber trees in their fourth year, some 30,000 trees from one to three years old, and



PLANTED "*CASTILLOA ELASTICA*" IN COLOMBIA.

[Three-year-old trees in plantation Campoalegre, in the Choco region.]

at the last report about 200,000 plants in seed beds awaiting transplanting. From now the preparation of seed beds will be an easy matter, as the older trees begin to yield seed crops, whereas previously seeds have had to be gathered from isolated wild trees, either difficult to find, or so remote as to make uncertain the transportation of the seeds before they perished.

Messrs. Angel and Ferrer market their plantains in Quibdo, sending them up in "dug out" canoes. The *plantanos* are the staple article of diet of the region, being either roasted or fried,



PLANTED "*CASTILLOA ELASTICA*" IN COLOMBIA.

[Specimen of seed beds on plantation Campoalegre, in the Choco region.]

ripe or green; boiled green, or cut up in stews or with pork and beans. A ripe *plantano* slit open and powdered with cheese, then roasted and served with butter, is a particular delicacy in the tropics. In Quibdo they sell at from 24 to 80 cents (gold) per ration of 64. The plantain trade at Campoalegre has become so important that the owners have ordered a large towing launch to handle the cargoes, and at the same time facilitate their own visits to the important commercial center Quibdo. Señor Angel is typical of the men who are leading in the regeneration of Colombia under President Reyes's government. He has an in-

terest in planing mills and a furniture factory at Quibdo, is manager of the large mercantile house of Eladio Ferrer (his father-in-law), and owns valuable interests in mines. Señor Ferrer is a young man of distinguished family, being a son of the well-known merchant and statesman Don Leoncio Ferrer. So enthusiastic have these gentlemen become with respect to rubber that they plan to have the better part of 2,000,000 trees producing on the 5000 hectares of Campoalegre within ten years.

Some interesting experiments are being made looking to the planting of the fiber plant "*sansaviera*" with rubber trees. This would not interfere with the corn crop which should always be planted with the rubber, and would begin to yield within 18 months, and continue to produce after the rubber trees reach a development that would stifle all but a shade loving plant. The indications are that this combination will be successful for developing large areas of the Choco and the great region opened up by the Colombia Central railroad which is now being constructed from the gulf of Urala to the rich interior of Colombia, and is one of the chief of the many agencies that are producing an economic revolution in Colombia.

Angel and Ferrer were to make a bid for the rubber ribbon at the Bogotá agricultural fair this summer, which was won last year by the brothers de la Torre with a slab of rubber from their young *Manihot* trees.

AN ALLEGED FRAUD IN RUBBER.

THE federal grand jury for the northern district of Illinois, at the July term, in Chicago, found indictments against Talton Embry and Hiram E. Rose, charging them with use of the United States mails to defraud, in their capacity respectively as vice-president and secretary of the San Miguel Plantation Co., which purported to be developing a rubber plantation in the state of Vera Cruz, Mexico, with headquarters in Chicago. Capiases were issued for these men, who later appeared before the clerk of the United States circuit court at Chicago, and gave bond for their appearance at the next term. At latest accounts no pleas had been filed. The United States attorney advises THE INDIA RUBBER WORLD that the trials will take place probably in October or November.

The San Miguel Plantation Co. was advertised as a corporation capitalized at \$200,000, under the laws of Illinois. The fifth annual report to the investors in the company, dated March 1, 1906, stated that the company then had under cultivation 400 acres in rubber, 450 in sugar cane, and 350 acres in corn. The company did not offer its shares to the public, but issued 2,000 bonds—one for each of the 2,000 acres in the property claimed—many of which bonds appear to have been sold at from \$250 to \$350. Dividends were promised on these bonds from the expected sale of produce, and it appears that money was actually distributed to the investors as follows: In 1901, 7 per cent. on the sums actually paid on account by the investors; in 1902, 10 per cent.; in 1903 and 1904, 15 per cent. yearly; in 1905, 2 per cent. instead of the "expected" 25 per cent., and in 1906, 1 per cent., after which payments ceased.

It was charged before the grand jury that these dividends instead of coming from the sale of produce on the San Miguel plantation were paid partly by Embry and Rose from their own pockets, and later from funds paid into the company by bond purchasers. It was charged that pictures of the company's plantation shown were really taken on another plantation, and that the company had made no sales of produce. The indictment of Embry and Rose followed several months of work carried on by a committee of the investors in the San Miguel company headed by Mr. A. A. Barber, secretary and treasurer of The C. E. Sutton Co., an iron firm, of Toledo, Ohio, represented by Willard L. White, an attorney of Chicago.

According to the Chicago *Tribune*, service on Embry was

sought in Cincinnati, where he had been connected with an important business firm, and Rose was looked for in Owensboro, Kentucky, where he occupied a costly home. The company's office in Chicago for the reception of funds was opened until the date of the indictments referred to.

This is the third case in which promoters of rubber planting companies in the United States have been brought to the attention of the courts. In 1903 Frank D. Bittinger, president of the Nicaragua Co., incorporated in New Jersey with \$1,000,000 capital authorized, and having an office in Chicago for the sale of lands in Nicaragua and the promotion of a rubber plantation there, was arrested on February 13, indicted on November 5 for the fraudulent use of the mails, and on December 18 was sentenced to one year and one day in prison and to pay a fine of \$1,000. A more recent development was the indictment in the Massachusetts courts, in 1905, of the officers of the Consolidated Ubero Rubber Plantations Co. for grand larceny, one of whom, Ferdinand E. Borges, is now serving a ten year sentence in the state prison.

RUBBER IN THE CONGO FREE STATE.

THE planting of rubber in the Congo Free State by legal requirement by the concessionaire trading companies has been referred to frequently in these pages. This interest is a subject of a late report by the United States consul



SHIPPING RUBBER ON THE CONGO.
[Steamer *Belgique*, at Citas.]

general at Boma, Mr. James A. Smith. He states that it is estimated that fully 13,000,000 plants have been set out, which should be capable of producing within a few years at least 650 tons of rubber annually. Mr. Smith states that it has been proved by experiments that the tree known as *Funtumia elastica* thrives better under cultivation and gives much quicker results than various species of creepers known as *Landolphia*. The quality of the tree rubber is excellent and a profitable product is available after 7 years, while ordinarily double this time is required before the vines yield in sufficient quantity to be profitable.

Mr. Smith says that while the annual exportation from the Congo has shown no diminution during the past several years, there is no question but that in many sections of the state the supply of wild rubber has rapidly diminished, and in a large section of territory is practically exhausted. Independent of the planting required of the trading companies, Mr. Smith learned that the Congo Free State has established three great centers of rubber cultivation each of 250,000 acres (1) in the Mayumbe district, near Banza; (2) in the Oubanghi district, near Duma; and (3) in the Lualaba-Kasai region, the idea being that one-third of the area will be planted within the next 6 years.

Further details regarding these new planting areas have not been available, but the consul general for the Congo Free State in the United States advises THE INDIA RUBBER WORLD: "Such plantations would be quite in line with the ideas of the king, who has consistently encouraged new plantations as well as the ordinary planting to replace exhausted vines and trees." It is known that the Congo trading companies for which Americans have obtained concessions are expected by the authorities to plant rubber to an important extent, and Mr. James Gustavus Whiteley, the Congo consul general referred to, states that one of these companies, the Société Forestière et Minière, has acquired 800,000 hectares [=1,976,800 acres] for the purpose of starting new rubber plantations on the Congo, though in this case it would seem probable that the terms planting and exploiting had been confused.

"TABBYITE" IS THE LATEST.

THERE are people in Utah who are indulging in dreams of wealth from the development of what they have been pleased to term Tabbyite—a material mined in the neighborhood of long known deposits of Elaterite, and having the characteristics somewhat of the latter, only more so. The new asphaltum product gets its name from an old Indian chief, Tabby, of the Uintah tribe, who discovered it on their reservation about 1895. He said nothing



SHIPPING RUBBER ON THE CONGO.
[Steamer *Dolisie*, at Citas.]

publicly about his find, and it was only after his death that the development of the tabbyite business began. The land on which it was first found is now the property of the Pittsburg-Salt Lake Oil Co., who have begun the manufacture of waterproof paints from tabbyite, and who intimate that before the end of the year they will be installing plant for turning out the new material in shape for its use as a rubber filler.

The first number of THE INDIA RUBBER WORLD ever printed referred to newspaper reports then current about the discovery of india-rubber mines in Utah, and the resultant "excitement over the prospective fabulous wealth" to flow from it. The material then newly discovered was elaterite, concerning which reports have continued to come to hand from time to time. Once it was stated that the late Joseph Banigan, of rubber manufacturing fame, had become a large investor in elaterite deposits in the Uintah country, but he continued to the end of his life to put natural forest rubber in his footwear products. Whether the "new substitute for rubber" with the catlike name is to come nearer setting the rubber world on fire we shall report in the regular course of events.

THE raw asbestos trade is active and higher prices are looked for in the near future.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED JULY 7, 1908.

- N** 802,383. Wheel for motor vehicles. [Relates to the attachment of a removable rim.] H. H. Boyer, Oyster Bay, N. Y.
 802,384. Covering for milking organs. [Of sponge rubber, for cow milking machines.] H. von Celsing, Stockholm, Sweden.
 802,657. Bath tub seat. J. P. Eustis, Newtonville, Mass.
 802,673. Wheel tire. [Relates to a leather tread for pneumatics, wide metal studs mounted thereon.] A. Michelin, Paris, France.
 802,699. Horseshoe pad. J. B. White, Buffalo, N. Y.
 802,760. Fastening device for rubbers. [meaning footwear]. H. R. Nelson, Walnut Grove, Minn.
 802,853. Pneumatic tire for vehicle wheels. J. R. Kline, Los Angeles, Cal.
 802,884. Means for attaching pads to boots and shoes. W. Plowright, Manchester, England.
 802,948. Shield for tires. R. H. Faughnder, assignor of one-fourth each to C. Pearson and G. Bustetter, all of Sidney, Ohio.

Reviews.

- 12,822. Overshoe. N. P. Bawler, Cleveland, Ohio, assignor to The Everstick Patents Co.

ISSUED JULY 14, 1908.

- 803,075. Wheel. [With pneumatic tire, and rim having a removable flange.] E. Hopkinson, East Orange, N. J.
 803,170. Hose clamp. I. Huser, Jack Wade, Alaska.
 803,189. Hose nozzle. H. F. McKechney, Rochester, N. Y.
 803,390. Machine for removing wrappers from hose after the vulcanizing operation and for rewinding said wrappers on mandrels. S. J. Sill, assignor of one-half to H. H. Hewitt, both of Buffalo, N. Y.
 803,475. Hose clamp. J. F. Gero, Newark, Ohio.
 803,554. Hose coupling. L. C. Onge, assignor, by direct and mesne assignment, to St. Onge Mfg. Co., Utica, N. Y.

Trade Marks.

- 31,012. J. Basler & Co., Paris, France. The word *Bonac*. For reclaimed rubber.
 31,013. J. Basler & Co., Paris, France. The word *Tonac*. For reclaimed rubber.

ISSUED JULY 21, 1908.

- 803,624. Apparatus for applying bottle stopper rubbers. I. Harding, Boston.
 803,638. Vulcanizer for repairing tires. C. E. Miller, Anderson, Ind.
 803,655. Cushion tire. C. L. Reimpers, Akron, Ohio.
 803,672. Tire for vehicle wheels. R. O. Stutman, assignor to the Bartholomew Co., both of Des Moines, Iowa.
 803,715. Vehicle wheel. E. Fishburn, Overbrook, Kans.
 803,832. Tire. H. B. Barnch, New York city.
 803,977. Tyne holding device for printing machines. S. Brown, New York city.
 804,014. Rubber tread or tire for wheels. E. B. Killen, London, England.
 804,052. Safety device for occupants of vehicles. R. Radtke, Suhl, Germany.
 804,059. Nozzle. J. Roshorough, St. Louis.
 804,066. Surgical appliance. L. G. Scarpa, Turin, Italy.
 804,084. Tire tread chain for automobile wheels, etc. J. C. Thomas, assignor of one-half to F. W. Barth, both of Corsicana, Texas.
 804,156. Device for locating and determining puncture in pneumatic tires. J. Lenderyon, Rogerstone, Monmouth, England.

Trade Marks.

- 34,110. William R. Bixey, New York city. Sectional view of an insulated electric cable. For insulated electric wires and cables and insulated tape.
 34,529. A. J. Slater, Montreal, Canada. The words *The Right of Way*. For rubber overshoes.
 34,622. National Shoemakers, Lewiston, Me. The word *Proclamation*. For cloth, rubber and leather shoes.
 35,186. The Goodyear Tire and Rubber Co., Akron, Ohio. A red seal, lettered in white *Red Seal Auto Tube*, in connection with the name *Goodyear* and the representation of a winged foot. For inner tubes of tires.

ISSUED JULY 28, 1908.

- 804,216. Leak stopper for hose. D. G. Kitzmiller, Harrisburg, Pa.
 804,276. Vehicle wheel [having a pneumatic tire and supplemental rim]. H. M. Martin, Columbus, Ohio.
 804,290. Vehicle wheel rim. E. C. Shaw, Akron, Ohio, assignor to The B. F. Goodrich Co.
 804,291. Vehicle wheel rim. *Same*.
 804,292. Vehicle wheel rim. *Same*.
 804,293. Vehicle wheel rim. *Same*.
 804,334. Composition for making artificial leather. H. Lewis, Fitzroy, near Melbourne, Victoria.
 804,377. Tire armor or protector. C. Filler, St. Johnsville, N. Y.
 804,450. Safety device for gas hose. B. Leyh, New York city.
 804,458. Resilient wheel of motor cars and other suitable road vehicles. T. Oldfield and J. A. Schofield, Ilalifax, England.
 804,490. Process for the production of pure caoutchouc. [The distegated plants, with a solution of calcium and magnesium sulphide, are boiled in sulphurous acid; the resulting substance is treated with alcohol; the

pure caoutchouc in the remainder is dissolved in naphtha, after which the solvent is evaporated for the purpose of securing the said pure caoutchouc.] A. Foelsing, Offenbach-on-the-Main, Germany.

- 804,586. Pneumatic pump. A. Brest, New Castle, Pa.
 804,594. Hose coupling. M. Cani, Cleveland, Ohio.
 804,613. Process of insulating electric conductors. J. T. H. Dempster, Schenectady, N. Y., assignor to General Electric Co.
 804,617. Machine for cutting strips of packing. J. J. Fearson, assignor of one-fourth to J. Conley, both of Philadelphia.
 804,676. Pneumatic tire protector. R. A. Mason, New Market, Iowa.
 804,750. Road vehicle wheel [with tire of compressible material between two longitudinal retaining rings]. J. Slee, Earlstown, Newton-le-Willows, England.
 804,751. Tire protector holder. F. O. Slanker, Pomona, Cal.
 804,790. Manufacture of covered wire. [Relates to a wire covering machine.] C. V. Ackerman, Passaic, N. J.

Trade Marks.

- 34,621. National Shoemakers, Lewiston, Me. The word *Staveil*. For cloth, leather, and rubber shoes.
 34,805. National India Rubber Co., Bristol, R. I. The word *Paracore*. For insulated wire.
 34,806. National India Rubber Co., Bristol, R. I. The words *National White Core*. For insulated wire.
 35,209. The Anchor Packing Co., Philadelphia. The letter *J*, in a circle on which are the words *The Anchor Packing Co.* For rubber belting, rubber hose, and rubber packing.

[NOTE. Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1907.

*Denotes Patents for American Inventions.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 1, 1908.]

- 5,933 (1907). Football cover of rubbered canvas. E. Meyer, Brussels.
 5,943 (1907). Inhaling tube with bulbous end protected with vulcanite cover. G. M. Thomson, London.
 5,761 (1907). Pneumatic tire tread with cup shaped treads. E. Martin, London.
 5,797 (1907). Boot with hollow rubber sole. F. Burgmann, Eisenhammer, Germany.
 5,772 (1907). Vehicle wheel with non-elastic tire and an auxiliary rim, carrying a solid rubber tire slightly projecting beyond the main rim, the object being to produce a non-slipping wheel. H. Spurrier, Leland.
 5,833 (1907). Motor car tire: filling made of starch and a metallic chloride enclosed in a rubber jacket; the tire may be hollowed to receive an air tube. G. W. Mascard and two others, London.
 *5,838 (1907). Coupling for attaching inflating pump to a tire valve. W. S. Stapley, Bridgeport, Connecticut.
 *8,856 (1907). Rubber for a pump valve. J. Rowbotham, Philadelphia, Pennsylvania.
 5,858 (1907). Vehicle tire comprising rubber tread blocks combined with sheet metal rims. P. Lamure, Bois-Colombes, France.
 5,860 (1907). Motor car wheel fitted with supplementary tire—solid or pneumatic—to prevent slipping. F. A. Ellis, Kennington, Surrey.
 5,861 (1907). Non-slipping appliance for solid or pneumatic vehicle tires. W. H. Oades, South Woodford, Essex, and another.
 5,912 (1907). Boot heel plate of aluminum and rubber studs. H. W. Smart, West Ealing, and another.
 5,926 (1907). Pneumatic tire with detachable studded tread band. A. Sedden, Southport, Lancs.
 5,944 (1907). Abdominal belt, for treatment of the kidneys, carrying rubber bladders for holding heating substances. S. Fackenheim, Cassel, Germany.
 5,951 (1907). Rivet or road stud for pneumatic tire treads. G. F. Deschets, Paris.
 6,024 (1907). Tire rim with detachable flange. J. S. Foley, West Bromwich, and another.
 6,042 (1907). Inflating pump for tires. A. E. Brown, Aston, Birmingham.
 6,054 (1907). Molding of pneumatic tire covers. E. L. Curbishley, Manchester.
 6,063 (1907). India-rubber rendered wear resistant by mixing with it clay, emery, carborundum, and graphite. R. Hutchinson, Liverpool.
 *6,114 (1907). Pneumatic cushions to be applied between the body and axels of a vehicle. A. C. Mather, Chicago, Illinois.
 6,216 (1907). Artificial leather for belt or tire covers made of ramie fiber and a mixture of dextrin, gelatine, and balata gum. L. V. Guillebeau, Paris.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 8, 1908.]

- 6,465 (1907). Studded tread for pneumatic tires. W. H. Paull and F. E. Hannan, Birmingham.
 6,480 (1907). Manufacture of molded footwear. A. E. Alexander, London. (Marvel Rubber Co., Bristol, Rhode Island.)

- 6,482 (1907). Non-slipping device for pneumatic tires. C. W. Pradeau, London.
- 6,531 (1907). Pneumatic tire protector and means of attachment. J. Lemome, Paris.
- 6,506 (1907). Golf ball having a core of rubber filled with air or gas under pressure. W. E. Hodgeson, Aberfeldy, Perthshire.
- 6,567 (1907). Press for molding raw india-rubber into blocks, for plantation use. R. Bridge, Castleton Iron Works, Rochdale, Lancs.
- *6,957 (1907). Hose reel. B. E. D. Kilburn, London. (C. A. Brinley, Philadelphia, and two others.)
- *6,614 (1907). Weaving of belting fabrics. E. C. R. Marks, London. (Multiple Woven Hose and Rubber Co., New York.)
- 6,634 (1907). Attachment of tire covers to rims. A. Hall, London.
- *6,654 (1907). Weaving of elastic fabric for tires, hose, and the like. W. M. Stevenson, Indian Orchard, Massachusetts.
- 6,663 (1907). Non-skid chain device for pneumatics. J. A. Harrison, Stickleford, Worcestershire, and another.
- 6,680 (1907). Football boot with adjustable ankle pad. J. B. Cannan, London.
- 6,737 (1907). Pneumatic tire cover. C. Fare and C. Suteau, Paris.
- 6,757 (1907). Supplemental wheels to prevent slipping of motor cars. H. Kinscy and G. Challenger, Swansea.
- 6,792 (1907). Mold for rubber shoes. J. W. V. Mason, Manchester.
- 6,832 (1907). Non-slipping chains for motor tires. W. H. Ellam, Anerley, Surrey, and another.
- 6,872 (1907). Golf ball having a core of rubber filled with an incompressible fluid. A. Selden, Brinkdale, Lancs.
- 6,926 (1907). Rivets for pneumatic tire treads. J. C. Fell, London. (Société le Palladium, Antiderapant Imperfiable, Paris.)

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 15, 1908.]

- 6,681 (1907). Pneumatic tire with sectional air tube. R. S. Wood, Manchester.
- 7,009 (1907). Waterproof garments with strips containing ventilating channels. L. Mistovski, Salford, Lancs.
- 7,042 (1907). Spring wheel with elastic tire. A. L. Ripert, Asnières, France, and another.
- 7,162 (1907). Composition for filling tires and apparatus for making it. W. J. Thorold, London.
- 7,243 (1907). Tire consisting of a core of cork enclosed in a cover of canvas and rubber. A. J. Boulton, London. (C. A. Gauld, Toronto, Ontario.)
- 7,250 (1907). Tire rim having rigid carriers to which solid rubber sections are attached by a vulcanization. A. T. Collier, St. Albans, and Reilloc Tyre Co.
- 7,266 (1907). Spring wheel with pneumatic cushion between the axle and felly, and elastic tread. J. R. Bise, Vienna, and two others.
- 7,266 (1907). Golf ball. The core of a rubber wound golf ball consists of a nucleus of superoxidized or solidified oil, formed by heating rape, cottonseed, linseed, or other suitable oil until it reaches an unchangeable cohesive and highly elastic state. R. Hutchison, Prestwick.
- 7,326 (1907). Rim for pneumatic tires. T. Dunn, London.
- 7,347 (1907). Heel pad for boots. D. Cook, London.
- 7,371 (1907). Rotating device for coagulating rubber, the latex being exposed to smoke within a drum. H. A. Wickham, London.
- 7,450 (1907). Apparatus for molding and vulcanizing rubber boots. J. W. V. Mason, Manchester.
- 7,461 (1907). Non-slipping device for elastic tires. W. T. G. Ellis, Gourrock, Scotland.
- 7,574 (1907). Appliance for marking playing balls. E. Jones, Birmingham.
- 7,602 (1907). Non-skidding device for pneumatic tires. J. W. Wedderburn, London.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 22, 1908.]

- 7,678 (1907). Pneumatic tube for chair rockers. K. Müller, Canditen, Germany.
- 7,684 (1907). Pneumatic tire with air tube protected by metal segments. A. S. K. Ryan, London.
- *7,693 (1907). Pneumatic tire with cover comprising layers of leather. F. Mesinger, New York.
- *7,701 (1907). Hoof pad. J. Dillon, Hackensack, N. J.
- 7,714 (1907). Regenerating process for rubber. E. A. L. Rouxville, Paris.
- 7,796 (1907). Cow milking machine. A. Gillies, Melbourne, Australia.
- 7,995 (1907). Rubber lining to render boots watertight. H. Burger, and F. Federolf, Munich, Germany.
- 7,968 (1907). Application of rubber to cause dentures to adhere to the gums. R. Galloway, Stirling.
- *8,010 (1907). Wheel tread comprising rubber blocks, springs, and a chain. A. L. Fennell and E. Scheinikow, New York.
- 8,027 (1907). Tire composed of an elastic core and a leather jacket provided with metal heads. R. Neufeld, Vienna.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, JULY 29, 1908.]

- 8,150 (1907). Apparatus for coagulating the latex of rubber. [Described in THE INDIA RUBBER WORLD, June 1, 1908—page 2913.] L. Radcliffe, London, and Pehr Olsson-Seifer, Fruitdale, California.
- 8,229 (1907). Tool for removing tire covers. G. B. H. Austin, London. (E. M. Bolger, South Yarra, Australia.)
- *8,289 (1907). Hoof pad. J. E. Gormley, Chelsea, Massachusetts.
- 8,344 (1907). Sole for goloshes. D. and F. W. Smith, Christchurch, New Zealand.
- 8,381 (1907). Artificial leather, produced from cotton or other tissues under various processes, one of which involves treatment with rubber solution. L. Gevaert-Naert, Bevere-Audenarde, Belgium.
- 8,475 (1907). Substitute for hard rubber, formed from wood waste, ground and mixed with a binding agent, after which mineral matters are added. F. Amer, Sichenbuergen, Hungary.

- 8,531 (1907). Tobacco pouch. H. W. C. Harvey, London.
- 8,534 (1907). Surgical irrigator or douche. M. X. Douchon, Brussels, Belgium.
- 8,597 (1907). Joint for butt ended tire tubes. J. Rees, Cardiff, Wales.

THE FRENCH REPUBLIC.

Patents Issued (with Dates of Application).

- 385,521 (Dec. 24, 1907). Rogers and Myers. Composition for filling tire punctures.
- 385,495 (Mar. 18). E. Decauville. Flexible mandril for use in repairing tire covers.
- 385,582 (Nov. 20). E. W. Baker. Pneumatic tire.
- 385,638 (Dec. 27). Société Anonyme des Pneus Cuir Samson. Iron studded tread for pneumatics.
- 385,548 (Dec. 24). F. Coufal. Interchangeable boot heel.
- 385,784 (Dec. 23). A. Del Semme. Cork tire.
- 385,848 (Dec. 31). C. R. Duggan. Pneumatic tire.
- 385,808 (Jan. 2, 1908). J. Kirschner. Process and outfit for repairs of tire tubes.
- 385,937 (Jan. 4). Russian-American India-Rubber Co. Method of attaching pneumatic motor tires.
- 386,012 (Jan. 7). E. Berquier. Pneumatic tire.
- 386,074 (Jan. 9). Franklin and Batis. Pneumatic tire.
- 386,186 (Jan. 13). Nordling. Demountable rim.
- 386,107 (Jan. 14). J. Ancel. Tire protector.
- 385,608 (Jan. 3). F. J. Gleason. Process for the manufacture of hollow articles of rubber.
- 386,017 (Jan. 8). Siemens & Halske Aktiengesellschaft. Process for the treatment of caoutchouc.
- 386,148 (Jan. 11). W. Price. Process for the manufacture of articles of rubber.
- 386,343 (Jan. 18). E. Kempshall. Pneumatic tire.
- 386,344 (Jan. 18). de Villepique. Cellular elastic tire.
- 386,389 (April 9, 1907). Tournay. Tire protector.
- 386,430 (April 10). J. Flament. Tire protector.
- 386,532 (Jan. 24, 1908). Clavierie and Comet. Tire protector.
- 386,318 (April 8, 1907). P. Charpentier. Process of repairing rubber shoes.
- 386,720 (April 16). Herault. Tire protector.
- 387,045 (Feb. 8, 1908). A. Lenitz. Vulcanizer for tire repairs.
- 387,213 (Feb. 13). H. Kuhnlen. Pneumatic tire.
- 387,145 (April 29, 1907). E. Barbier. Elastic tissue.
- 387,243 (Feb. 14). Nicolas et Cie. Apparatus for the extraction of caoutchouc and other gums.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Robet, Ingenieur-Conseil, 10 avenue de Villiers, Paris, at 50 cents each, postpaid.]

RUBBER TRADE PARALYSIS IN ASHANTI.

IT is not much of a rubber country which has not some peculiar obstacle to the production of rubber, compared with which the fabled Kansas grasshopper and the less fabled fear of frost in the Delaware peach country are trivial. These remarks are suggested by a parliamentary paper on Ashanti, which is now included in British West Africa. Ashanti had become a considerable rubber producing country, the figure reaching in one year 1,354 tons, when a condition of affairs unexpected by the white residents developed. It appears that a fetish priest at Tekiman suddenly announced the imminent advent of a new "god," who was to bring riches to the poor and reduce the rich to abject poverty. At his coming the black man would dominate the whites. He let it be known particularly that any man found tapping rubber in the forests would on the "god's" arrival be turned into an antelope. The official report states: "Incredible as it may appear, this impostor succeeded in paralyzing the local rubber trade. He was eventually arrested and is at present detained in Coomassie. His fetish has fallen into disrepute, and is not now heard of."

UPRISING OF CONGO RUBBER GATHERERS.

REPORTS have reached Brussels of a widespread revolt in the Abir district of the Congo Free State. This is the territory held under concession by the Anglo-Belgian India-Rubber and Exploration Co., one of the oldest trading monopolies in the state and one which at times has been marvellously profitable. It is stated that the natives refused to collect rubber, attacked the whites, and burned several factories.

The Late Dr. Habirshaw.

THE death of Dr. William M. Habirshaw, at his summer cottage at Saratoga Springs, on August 15, came with a suddenness that gave a shock to his friends, though he had long been under the care of a physician. Within the present year he had made a visit of several months to Europe on account of ill health, returning in June. Apoplexy was the immediate cause of his passing away.

William Martin Habirshaw was born in February, 1835, at No. 197 William street, New York. His education was obtained in New York and in Europe. From early manhood until the end his inclinations and his achievements kept him in close touch with scientific matters. He was a member of leading technical societies in the United States and abroad, and numbered among his friends many men notable in the scientific world.

Dr. Habirshaw had acquired more than a national reputation as an analytical chemist, after having served in the engineering corps of the United States navy, when he became profoundly impressed with the great commercial possibilities of electricity, and realized how largely its successful application to the needs of mankind would depend upon safe and economical means of insulation. Hence he concentrated his efforts, first upon the production of insulation compounds, and again upon the improvement of machinery for the application of those compounds to electrical conductors. In both branches of development he was ultimately very successful, the great manufacturing business which he founded being based upon the merits of his patented inventions.

Dr. Habirshaw was one of the pioneers of the insulated wire industry in America. Early in its development he was associated for a while with Leonard F. Requa, but their work later carried them into different paths, which led to the formation of separate companies which achieved prosperity. Dr. Habirshaw, in 1886, organized The India Rubber and Gutta Percha Insulating Co., of which he became president and general manager, with a factory in New York city, at Twenty-fourth street and Eleventh avenue. It was devoted to the manufacture of the Habirshaw compounds, the demand for which rapidly grew until larger and more eligibly located premises became necessary. About 1890 the business was removed to Glenwood, in the city of Yonkers, which adjoins New York on the north. The company purchased there a disused machinery plant, which was changed to suit its purposes, and with ground enough attached to provide for the constant growth of the works which has since taken place.

The products of this company are most varied, being in requisition by the government, by great corporations, in private houses and on steamships—not only at home, but wherever electricity is employed commercially. Reference is made to these details to illustrate the success which attended Dr. Habirshaw's efforts in his chosen field of work. In time the company became convinced that its title was unnecessarily long and inconvenient,

and on January 1 last the name Habirshaw Wire Co. was substituted for it, this being simply the legal adoption of a title familiar in the electrical trade. Dr. Habirshaw retained to the end important holdings in the company, and gave to it much personal attention, but for several years his health was a matter of concern, and he became especially interested in training and organizing a corps of men who should be ready at any time to assume the whole burden of responsibility.

The residence of Dr. Habirshaw in New York was at No. 341 Madison avenue. Funeral services were held on the morning of August 19 at St. Thomas's Episcopal church, New York. A widow survives. An only son, William Habirshaw, a young man of great promise, and associated in his father's work, died ten years ago. A brother, J. Habirshaw, also interested in the business, died in 1904.

TRIBUTE OF RESPECT.

At a meeting of the board of trustees of the Habirshaw Wire Co., held on August 17, 1908, the following minute and resolutions were unanimously adopted:

On Saturday, August 15, 1908, at Saratoga Springs, New York, William Martin Habirshaw died in the seventy-fourth year of his age.

From early manhood Dr. Habirshaw occupied an honorable and distinguished position in both the business and scientific world. After retiring from the United States navy, where he served as an engineer, he began his career as an analytical chemist, and soon rose to the front ranks in his profession. He became a member of the Chemical Society of London, and of other scientific organizations both here and abroad.

At an early date he perceived the commercial possibilities of electricity, and organized and became president and general manager of The India Rubber and Gutta Percha Insulating Co., a pioneer in this line. His sterling honesty and exceptional scientific ability gave the company a high standing. Its title was recently changed to that of the Habirshaw Wire Co., and he continued to maintain a most active interest in the affairs of this company up to the time of his death.

For the past five years he has been a sufferer from a disease which he knew to be incurable. During this long period he faced the inevitable with calmness and bravery. His honesty, hospitality, loyalty, and exceptional scientific attainments drew around him a large circle of friends to whom his death will come as a deep personal loss, in which we, his close associates and fellow members of the board of trustees of the Habirshaw Wire Co., fully share.

Resolved. That as a mark of respect for the character of William M. Habirshaw, and as an expression of our loss in his death, the works and general offices of the company be closed on the day of his funeral, Wednesday, August 19, 1908.

Resolved. That a copy of these minutes and resolutions be sent to his family.

Dr. Habirshaw took a keen delight in club life, and was an active member of the Union League, Century, Chemists, Electrical, New York Yacht and other clubs. He was a man of wide culture and liberal tastes; he was consulted frequently by leaders in electrical and chemical circles, and enjoyed the intimate friendship of the most distinguished men in them. At his table were entertained likewise authors, actors, artists, army and navy men, financiers and others, all of which classes appreciated him highly.



WILLIAM MARTIN HABIRSHAW.

The Analysis of India-Rubber.

DIE ANALYSE DES KAUTSCHUKS, DER GUTTAPERCHA, BALATA UND IHRER ZUSÄTZE. Mit einschluß der chemie der genannten stoffe. Von Dr. Rudolf Ditmar. Wien und Leipzig: A. Hartleben. 1909. [Paper. 8vo. Pp. viii + 288 + plates. Price, 10 marks.]

THOUGH much research work has been done in the analysis of india-rubber and compounding ingredients, and the chemistry of these substances, during the six years that have elapsed since the appearance of Dr. Weber's book, the records have been scattered through very many technical publications, accessible in their totality to only a few persons. That Dr. Ditmar should have undertaken a new collective work in this field, brought up to date, will be welcomed by all who are interested in the technology of rubber. In so far as the book is intended as an introduction to the subject, and to enable the chemist of general scientific education to handle analytical propositions in the rubber factory, Dr. Ditmar has achieved his purpose.

The author says in his preface that his book has had its origin in practice, but in parts of it sufficient account has not been taken of practical needs for the laboratory of a rubber factory. Many details as to general layout, apparatus, and tests that may be in every way sufficient for a school laboratory must be changed for a laboratory which is in constant touch with the needs and difficulties of manufacture. The main difficulty for the chemist in applying his science to the rubber business has always been the want of practical knowledge of factory operation, and with too much reason this lack often has prejudiced the rubber worker against scientific advice and supervision of the business. The fundamental causes of most difficulties in the factory cannot be detected by an occasional superficial insight into methods: the ability to apply the result of scientific research successfully to practical problems of manufacture can be obtained only by permanent close relation to and observation of all phases of factory practice. It is important to impress upon the young chemist that a familiarity with the factory, gained by research work based upon its difficulties, will be of greater value to him than any amount of learned theory which he does not know how to apply. A book on the practical analysis of rubber ought to bear more upon this point, and suggest a closer connection between theory and the solving of practical difficulties.

The first three chapters relate to the theory of india-rubber, gutta-percha and balata, based upon the most recent research. The compilation is well done, though perhaps the space devoted to each feature is not always proportional to its importance. Then follow 50 pages devoted to testing and the treatment of compounding ingredients. Comparatively little original information is given, and there is a failure at times to point out the specific qualities of compounds in reference to their practical application.

Chapter V, entitled "Analyse des Kautschuks," opens with plans for a rubber factory laboratory. It may be suggested that the author does not recognize sufficiently that such a laboratory should serve four distinctly different purposes: (1) A testing place for raw material, as a function of the purchasing department; (2) a testing place for manufactured articles, as a function of the sales department; (3) a controlling place for manufacturing processes, as a function of the manufacturing department; and (4) an experimental place for improvements and inventions under its own supreme management.

The most interesting and valuable part of the book, for the analytical chemist, is the compilation of the modern endeavors to find a direct method for the estimation of the rubber substance itself in vulcanized articles and a direct method for the rubber combined sulphur which could be depended upon in every case. None of these newer methods has proved so satis-

factory as to justify the rubber industry in changing materially its testing methods, which are still based for the most part upon Henriques and Weber. Among the sulphur tests the Eschka estimation by means of the magnesia mixture, which is much applied in America, and the useful Koneck rapid method receive scant treatment. Several conclusions as to the usefulness of testing methods for practical purposes must be accepted with reserve, partly because based upon only a few experiments, partly because the practice has no interest in results derived from these methods. The analysis of gutta-percha and of balata also receives attention.

The final chapter, on the technical testing of rubber articles for practical serviceability, is filled largely by the rather old investigation of Heinzerling and Pahl. The oxidation method of the author does not take sufficient account of the surface action and therefore is hardly as reliable as it appears in the record.

The too common fault of comparing vulcanized rubber samples on a wrong basis for technical serviceability is not pointed out strongly enough. It is essential to find the best conditions for each brand of rubber at first by a series of tests with one brand only, before comparing several brands. Even different consignments of the same brand will sometimes show different conditions. Certainly samples with different qualities should not be subject to the same heat, time, and compound tests with a view to getting an idea of their value.

The serial test of a single class of rubber for finding the best condition should be so arranged that it can be expressed conveniently by comparison curves, not taking a single figure of strength or elasticity as indicative, but an average valuation figure. This formula has proved satisfactory for this purpose:

$$\frac{\text{breaking strength} \times \text{stretch of break}}{\text{percentage of permanent set}}$$

Any convenient unit of size and time to be taken, but this unit of course constant for one whole investigation.

For arriving at such a curve it is of course essential to start with such conditions of heat, time, and amount of sulphur or other effective compound as are in the greatest possible conformity with practical conditions, changing only one function for the series simultaneously, keeping the other functions constant. Only by finding out in this way the best condition for each class of samples is to be obtained a comparison based on the results of every class, for the technical valuation of rubber.

While generally the book possesses the defects of lack of system and of too positive conclusions, especially when derived from results which do not take sufficient account of practical conditions, yet as a collective description of the latest research on rubber it is a meritorious work and will prove useful. Dr. Ditmar's fear of serious differences between the old and the modern rubber man is hardly justified, at least by conditions in America. A modern rubber chemist, who has gained the necessary practical knowledge, will meet only with support, coöperation and appreciation whenever he meets the intelligent superintendent or manager of a rubber factory, and these desirable relations will be improved, rather than otherwise, by the study of books like Ditmar's.

ERWIN MEYER, PH.D.

THE American Rubber Co. (Boston), who state that they own property in Cambridge assessed at \$233,400, and do an annual business of \$5,000,000, have filed a bill in equity in the Middlesex superior court to restrain various other factories named in their complaint from constructing and maintaining a railway in Binney street, Cambridge, alleging that the same would inconvenience the public and deprive the plaintiffs from a proper use of the street.

New Rubber Goods in the Market.

"GIBRALTAR" CLOTH INSERTION WATER BOTTLE.

ONE characteristic of this new cloth insertion water bottle, as will be seen from the illustration, is its shape, which is patterned after the all rubber styles rather than the

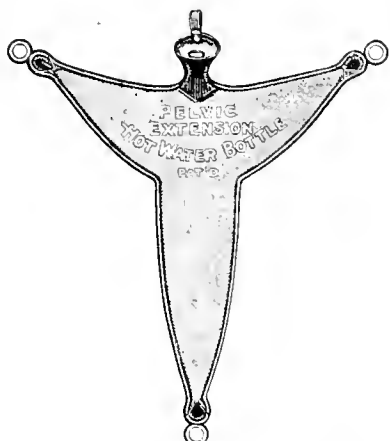
flat edge cloth insertion bottles which for years have been on the market. This not only gives the "Gibraltar" a distinctive shape, but it insures full capacity, a very important feature. Another notable characteristic of this construction is the seam employed. It is made on the theory that cloth insertion fabric on cloth insertion does not make a sure connection. In the "Gibraltar" an all rubber contact has been arranged for the two sides of the bottle, this being reinforced by an all rubber strip over the seam, then a cloth insertion strip over the all rubber, and finally the outside all rubber binding over it. A special cement is used which makes it difficult to pull or even pry off the binding. The result is a triple reinforced seam, rendering it next to impossible for the bottle to leak at this point, generally recognized as the weakest part of a cloth insertion article. The stocks used in preparing the fabric are of the shades of color which have been found to be most popular. [The B. F. Goodrich Co., Akron, Ohio.]



"GIBRALTAR" WATER BOTTLE.

"PELVIC" EXTENSION HOT WATER BOTTLE.

EVERY physician finds frequent occasion to require a hot water bottle of special shape, and not a few makes are now on the market in which the conventional form of water bottle is departed from.



"PELVIC" EXTENSION HOT WATER BOTTLE.

The most recent addition to the list is illustrated here. Its peculiar form allows it to be bound directly to parts not reached conveniently by other appliances, though it may be worn on any portion of the body. The device is placed on the abdomen and the upper ends united behind, attached to the loop on the extension. The same principle of construction is applied to ice bags. [Bailey Specialty Co., No. 34 West Thirty-third street, New York.]

MORGAN & WRIGHT MOTORCYCLE TIRE.

THE increasing use of motorcycles in the United States has led the various tire manufacturing firms to give attention to the special needs of these machines in the matter of rubber equipment, thus following the example of the trade in Europe, where the use of motorcycles developed at an earlier date. Morgan &



MORGAN & WRIGHT MOTORCYCLE TIRE.

Wright (Detroit, Michigan) have added to their extensive line of products a corrugated motorcycle tire of the detachable, double clinch type. The casing is formed in shape to fit the rim, instead of being made flat, as usually is done; the inner tube also is distinctive, in that it is made of several plies of rubber instead of a single ply.

THE "FAULTLESS" RUBBER RETURN BALLOON.

THE rubber bubble illustrated not long ago in THE INDIA RUBBER WORLD, was a mighty fascinating toy. In the Rubber Return Balloon, however, the inventor gets up something that is even more fascinating. The rubber bubble after being blown up by the inflating pipe and thrown off always drifted down toward the

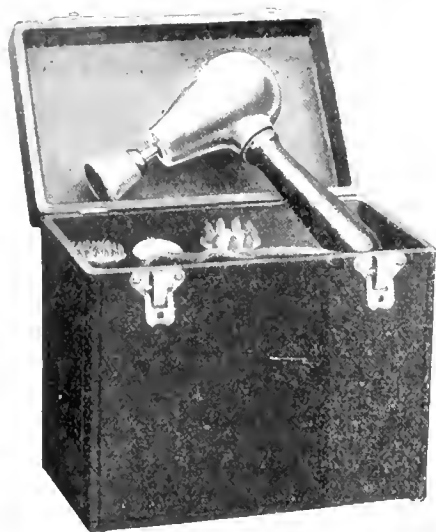


"FAULTLESS" RUBBER RETURN BALLOON.

floor. The return balloon, however, with its little kite tail is held in such position that it rises anywhere from 10 to 50 feet in the air, and when it is deflated comes back to earth. It is an ideal toy and one that is bound to be universally popular. [The Faultless Rubber Co., Ashland, Ohio.]

RUBBER IN "VIBRATORS."

THE remedial value of massage having become recognized so generally now as to no longer need argument, the question is how best to secure its benefits. Treatment by the highly trained professional human hand being not always available, mechanical substitutes have been invented that have the commendation of



MONARCH VIBRATOR NO. 1.

high medical authority and are coming into wide use. Like so many other modern devices, these depend for their value or practicability upon the employment of rubber, a considerable amount of which already is in demand for equipping the "vibrators." In the outfit known as the "Monarch" vibrator, of which some illustrations appear herewith, the idea is to attach the device to the electric lighting installation in the house, if there be



[Soft rubber teeth.]



[Hard rubber.]

MONARCH VIBRATOR APPLICATORS.

one. If not, vibrators are supplied which run on their own dry cells. It is this type which is shown in the largest cut—Monarch Vibrator No. 1. This weighs only one pound, complete, rendering it convenient to handle. Prominent in the picture is the "motor," with ebonized handle, with several feet of cord attached, which allows the motor to be taken out of the box for use. The rubber toothed attachment shown on the motor is one of half a dozen or more "applicators," each for the treatment of a particular character—for the body in general, for the eye or face, for the scalp, and so on. The two smaller cuts show (1) a soft rubber toothed applicator for facial treatment, and (2) a hard rubber applicator for body treatment. The applicator for the eye and light facial treatment is smaller, of special shape, and of extra soft rubber. [Monarch Vibrator Co., Jackson, Michigan.]

"TINY TOURISTE TOUCHE."

What is probably the smallest douche yet placed on the market is shown in the illustration herewith, which exhibits the

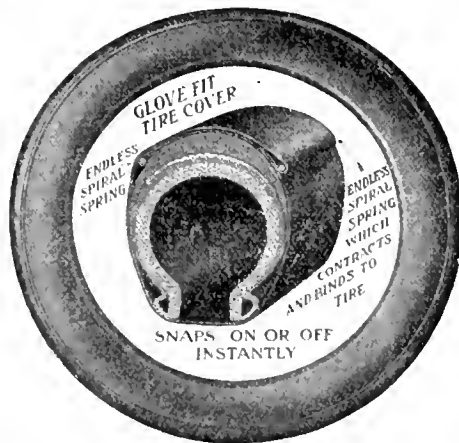
device when put in shape for carrying in the pocket or handbag.

TINY TOURISTE
TOUCHE.

It consists of a pump, a nozzle, and a connecting rubber tube. Here the tube is shown wrapped about the nozzle, and both placed inside the pump, the two ends of which can be unscrewed. In this shape the whole is only 6 inches long and less than an inch in diameter, while the weight is only 3 ounces. Though so small, this device is referred to as being very effective, throwing a forceful spray, the energy of which may easily be regulated. The outer tube is a handsome nickel plated article, made by an experienced firm in the surgical implement trade. The whole is supplied in a rubberized pouch. It is protected by a patent granted to Charles Remhof. [The T.T.T. Manufacturing Co., Brooklyn, New York.]

A NEW HOPEWELL TIRE CASE.

THE Hopewell tire case is a continuous casing, which wraps around the tire to protect it from water, dust, grease, and the like. Since the inner diameter of the tire case does not have to pass over the outer diameter of the tire, as in some other makes, the inner portion of the case is made a perfect glove fit to the tire, and thus does not present a wrinkled appearance when in use. This line of tire cases has been on the market for some years, but an additional patent has been granted (United States, No. 881,411), which covers an improvement in the substitution of a spiral wound japanned



HOPEWELL TIRE CASE.

piano wire spring in place of the wire cord used formerly. This has been appreciated by the trade, so that sales this year are stated to be four times as large as before.

THE ACRE A GOOD INVESTMENT.

The purchase from Bolivia of the Acre district appears to have been a profitable piece of business for Brazil. The indemnity paid, exclusive of the cost of the Madeira-Mamoré railway, now building, was £2,000,000 (£2,050,000, including bankers' commissions). Up to the end of 1907 more than this much was received by the Brazilian government in duties charged on the export of rubber from the Acre district—£28,525 in 1903; £121,013 in 1904; £556,716 in 1905; £570,505 in 1906; and £841,841 in 1907—totals, £2,118,401.

The Growing Field for Rubber Tires.

THE taxicab interest continues to grow rapidly in America as well as abroad. The incorporation of the American Taximeter Cab Co. was mentioned in the last *INDIA RUBBER WORLD*, with \$1,500,000 capital authorized, and planning to operate in New York, Boston, Chicago, Philadelphia and Washington. It is stated that the greater part of the capital has been subscribed, and orders have been placed for 400 cabs. The average cost is said to be \$2,000. The new vehicles are expected to be ready by October or November. Two hundred each will be built by the Garford Motor Co. (Flyria, Ohio), and the New Departure Manufacturing Co. (Bristol, Connecticut), the president of each company having an interest in the American Taximeter Cab Co. It is stated that five-year contracts have been made already with several of the best hotels in New York and the other cities named, and stands have been secured at the most important railway terminals.

The management call attention to a contract that has been made with a rubber factory to equip the cabs with pneumatic tires at a fixed cost of 2 cents per mile, which "obviates the necessity of tying up a large amount of capital in tires." It is the plan of the company, as of the other taximeter concerns both in America and in Europe, that the chauffeur shall furnish his own gasoline, and shall receive 20 per cent. of the gross earnings of his cab in lieu of other wages. The company plan later to put into service a number of delivery motors, for which contracts will be made with large department stores.

The board of the new company embraces beside the two automobile manufacturers mentioned already, several New York hotel men, the president of the Erie railroad, an official of New York's greatest grocery corporation, and other men prominent in business affairs. The active manager is L. H. French, the vice-president, and the offices are at 31 Union Square, New York.

The articles of association of the New York Taxi Cab Co., Limited, appeared in the *Paris Bulletin Annuaire au Journal Officiel* of August 3, from which it is inferred that application will be made for listing the company's shares on the *Paris bourse*.

G. Winthrop Sands, of New York, who was killed in an automobile accident at Poissy, France, on July 29, was one of the three directors in America of the London company—The New York Motor Cab Co., Limited—operating a taxicab service in New York. [See *THE INDIA RUBBER WORLD*, July 1, 1908—page 328.] Mr. Sands was a stepson of William K. Vanderbilt, Sr., which may account for Mr. Vanderbilt having been reported to have an interest in the New York Company.

TAXICAB INTERESTS IN EUROPE.

THE Electric Taxicab Co., Limited, with £300,000 [= \$1,459,950] capital, has been formed to operate in London a service of electric taxicabs, made by and under the patents of the Electromobile Co., Limited, formed in 1902 with £50,000 capital, and referred to as having been successful in the production of electric vehicles. The new company plan to begin with 100 cabs.

The Consolidated Motor Cab Co., Limited, is a new London company, capitalized at £100,000 [= \$480,050], and formed to take over British Motor Cabs, Limited, and extend the business. The latter company was formed last year for experimental purposes, and has run 10 taximeter cabs with such good results as to lead to the formation of a larger new company, which purposes at once to put in operation 100 additional cabs. The average daily takings of the British Motor Cabs, per car, during June, is stated to have been £2 5s. 4d. [= \$11.02]. Figuring on only £2 per day the new company's prospectus promises net earnings from running 200 cars of £34,050 [= \$165,704.32] per year.

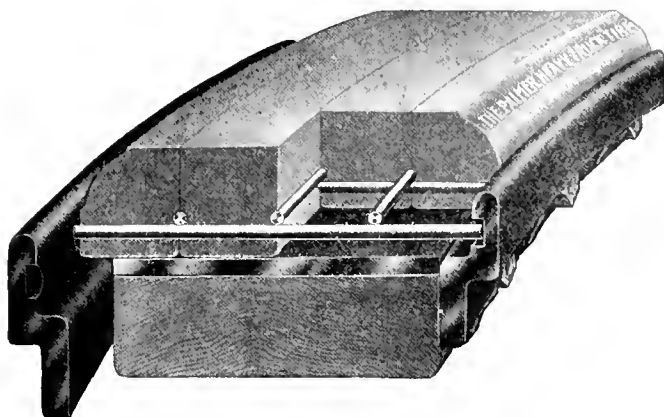
The Provinces Motor Cab Co., Limited, obtained delivery of their first cabs in March. They had in service an average of 31 per day in April, 67 in May, and 98 per day in June, and claim to have earned a profit. They hope within a year to have cabs in operation in every British town of importance.

At the second annual meeting of Delahaye & Co., Limited, a French motor car business which has been organized as a British company, it was stated that 200 taxicabs of their make were in operation in Paris and the number was daily increasing; they had 100 in New York, and they had been introduced in many French cities.

AMERICAN AUTOMOBILE STATISTICS.

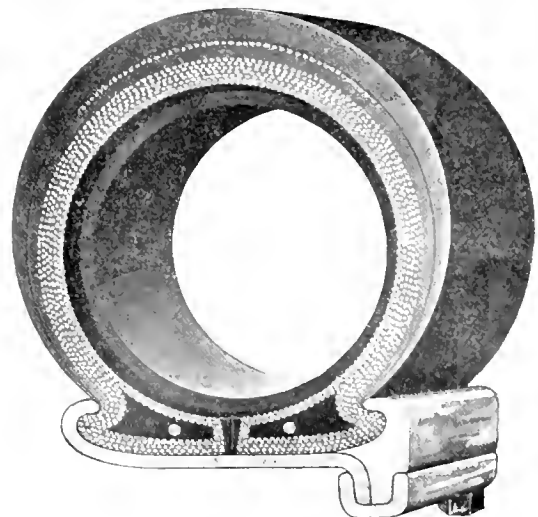
THE number of automobiles in the United States is estimated by the general manager of the American Motor Car Manufacturers' Association at about 145,000, of which about 47,000 were sold during 1907 at a valuation approximately of \$100,000,000. New York city alone boasts of 20,000 automobiles. The number of automobile factories in the United States is stated by the same authority at 200, of which at least 125 may be said to be producing machines in quantities. The employees number 58,000, without including those engaged in making a great variety of accessories, large and small.

The secretary of state of New York informs *THE INDIA RUB-*



A NEW HEAVY COMMERCIAL TRUCK TIRE.

[Invented by H. A. Palmer, Akron, Ohio. Made in annular sections with transverse holes for cross rods near the base. Between the annular sections and over or above the cross rods are circumferential wire rings.]



"REPUBLIC" DETACHABLE TIRE AND RIM.

[For automobiles. Made by The Republic Rubber Co., Youngstown, Ohio.]

BER WORLD: "Up to June 30, 1908, there have been 57,857 statements of owners of motor vehicles filed in this office. However, this does not show that there are that number of machines being operated in New York State, as 20,000 or more of these statements have been canceled. There were 8,522 statements filed last year from January 1 to June 30, and 8,246 filed this year from said dates."

The number of automobiles registered in New Jersey under the law of 1906, between April 12 and December 31 in that year, was 13,759. A new registration being required each year, the total number in 1907 was 17,619. The registration for the first half of 1908, to July 1, was 11,532, against 8,521 during the first half of last year.

The registration of automobiles is required in every state, but there is a lack of uniformity in systems, and it is practically impossible, in most states, to learn the number under registration. A suggestion has been made for a uniform system of registration throughout the country, for which various advantages are claimed.

AUTOMOBILES IN GERMANY.

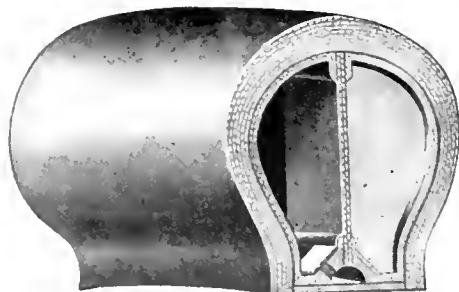
THE number of motor vehicles in Germany on January 1, 1908, was stated officially at 36,022, of which 14,671 were automobiles, 1,778 commercial vehicles, and 19,573 motor cycles. The increase in the number of all such vehicles in the city of Berlin during the year appears to have been only 6, although the increase throughout the empire was 33 per cent.—the number on January 1, 1907, being 27,026. The number of foreign owned cars which entered Germany for touring purposes during 1907 was 5,686.

TIRES AND TIRE MAKERS.

A COMPETITION for mechanically operated tire inflators for automobiles will be a feature of the coming Paris automobile show in the Grand Palais. Any type of apparatus is eligible to compete which does not use compressed air prepared in advance.

Mr. Fred C. Hood, of the Hood Rubber Co. (Boston), took with him on a recent visit to Europe an automobile equipped with his firm's "Shawmut" tires, which withstood 2,900 miles of touring without reinflation, which is not a bad showing for Boston air.

The tires made by the long-established factory of O. Englebert fils et Cie., at Liege, Belgium, are represented in the United States by the William Sanford Co., in Philadelphia.



"AMERICAN" PUNCTURE PROOF MOTOR TIRE.
[American Motor Car Tire Co., Mansfield, Ohio.]



"AMERICAN" PUNCTURE PROOF MOTOR TIRE.
[Sectional view, showing compartments.]

The use of solid rubber tires on the better class of carriages is increasing in Copenhagen, according to the American consul, Mr. Frank R. Mowrer. The introduction of taximeter cabs is leading to an increased demand for pneumatics. Solid tires are imported mainly from England. American made solids are referred to as being too soft, and while relatively cheaper at the factory than British makes, the transportation charges offset this advantage.

A tire endurance test of interest resulted from a tour of 3,000 miles across Queensland, by the Hon. J. W. Blair, of that country, in a Panhard car, fitted with "Continental" tires. He covered the whole trip on one complete set of tires, which at the end of the journey showed very little wear, though the roads in many cases were very rough.

Rubber tires of American make, if imported into France, pay a duty of 90 francs per kilogram [= \$17.37 for 220 pounds], while tires from other countries are dutiable at only 70 francs [= \$13.51] for the same weight. In consequence, according to the American general consul at Marseilles (Mr. Robert P. Skinner), France imports very few tires from the United States.

The American consul general at Marseilles reports that the use of pneumatic tires with chains woven about them, such as are seen in New York, would not be permitted in French city streets. But he reports an extensive use of nail studded tires, which he thinks are doing incalculable damage to the roads.

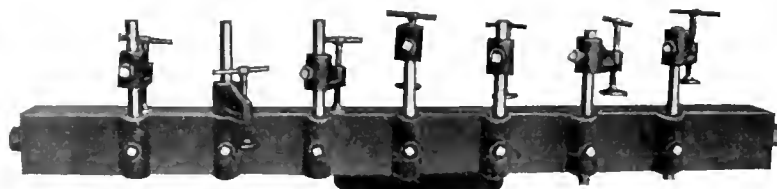
ELEAZER KEMPSHALL IN EUROPE.

IN London *Motoring Illustrated* is pictured a street scene showing a row of "sandwich" men, who, in addition to bearing over their heads boards advertising the Kempshall Tyre Co., wear motoring coats and parade the streets with Kempshall tires flung over their shoulders. A procession of these men in the picture mentioned is headed by a motor car, one of the occupants of which is described by our contemporary as "Colonel Eleazer Kempshall, inventor of the tire and the golf ball which also bears his name."

ANYBODY CAN USE "RUBBER."

THE United States circuit court of appeals at St. Louis, on August 14, handed down a decision in the case of the Trinidad Asphalt Co., a corporation of Missouri, and the Standard Paint Co., a corporation of Virginia. The suit grew out of an article put upon the market in 1904 by the Standard Paint Co. called "Rubroid." In 1904 the Trinidad Asphalt Co. put out a similar line of goods and marked it "Rubber O." The Standard company enjoined the Trinidad from using the name. The lower court sustained the contention. An appeal was taken by the Trinidad company and as a result the decree was reversed. The appellate court held that "rubber" belongs to the public and that any one can use it.

THE Leyland and Birmingham Rubber Co., Limited, report trading profits for the year ended June 30, 1908, of £37,094 [= \$180,519.55]. The directors recommended a dividend for the last six months of 5 per cent., making, with the interim dividend, 7½ per cent. for the year. The carry over is £7,874, against £1,262 last year.



EXCELSIOR INNER TUBE STEAM VULCANIZER.

[Will vulcanize at one setting long cuts, or severe punctures at a time.
John Wishart Machine Works, Inc., Chicago.]

THE RUBBER INDUSTRY IN AKRON.

BY A RESIDENT CORRESPONDENT.

THE announcement of rubber tire prices due on September 1 is looked forward to with interest, especially as a slight reduction is confidently expected. The rubber tire trade the past year has been heavy, notwithstanding the flat business conditions, and although the end of the 1908 season is near, the plants are still quite busy, many of them running at night.

The experts of the Nederlandsch Guttapereha Maatschappij (Netherlands Gutta-Percha Co.), manufacturers of automobile tires at Singapore [see THE INDIA RUBBER WORLD, July 1, 1907—page 318] have been investigating the different types of tires in the market, and have decided to manufacture the Swinehart tires, according to a statement made by the Swinehart Clincher Tire and Rubber Co. This company claims that 90 per cent. of all solid rubber tires in the world are manufactured under the Swinehart patents—either side wires or clincher—though the claim is disputed by competing companies.

Some interesting figures regarding the extent of the Akron rubber industry have been compiled by W. A. Johnston, president of the Rubber Products Co. According to them the twelve principal rubber manufacturing plants of Akron, including Barberton, in 1907, had an output of \$33,000,000 worth of goods, which is equal to one-third of the entire rubber goods output of the United States five years ago. The capital invested in these rubber factories is placed at \$23,000,000; expended for labor annually, \$9,000,000, or \$30,000 daily. These last figures do not include what is expended in machine shops for rubber machinery, nor that expended for merchandise, printing, shipping, and other like purposes. The total of \$33,000,000 includes the product of the hard rubber and reclaiming plants. About one-third of it relates to rubber tires alone. About 10,000 people are employed in the Akron rubber industry. In reference to the rubber worker and a "rubber" city, Mr. Johnston says: "We have one of the best cities in the United States, and it is made so because rubber factories are better for a city than iron, steel, or glass, as the rubber worker is paid good wages with steady work the year around, while the iron and glass business is dulled by many shut-downs—throwing thousands out of work for months at a time—which results in rubber workers as a class being better citizens."

The rubber manufacturers of Akron are taking an active interest in the formation of a chamber of commerce, something that this city has been sadly in need of for years. The chamber has been organized with 60,000 shares, insuring an income of \$6,000 a year. O. C. Barber, millionaire manufacturer and a director in The Diamond Rubber Co., has been elected president, and A. H. Noah, treasurer of the Diamond company, and C. B. Raymond, of The B. F. Goodrich Co., are on the board of directors, Mr. Noah having been chosen chairman. Other rubber men on important committees are the following: Transportation—E. L. Tragesser, The B. F. Goodrich Co., chairman; H. B. Bryant, The Diamond Rubber Co. Municipal—Joseph Dangel, American Hard Rubber Co., chairman. Industries—E. C. Shaw, Goodrich company, chairman; A. H. Marks, Diamond company; H. S. Firestone, Firestone Tire and Rubber Co. Publicity—James Braden, Diamond company; E. C. Tibbetts, Goodrich company.

The Palmer-Hawkins Rubber Tire Co. has been incorporated, under the laws of Ohio, with the right to manufacture rubber goods of all kinds, but the primary purpose is to put upon the market a new heavy motor truck tire patented by H. A. Palmer, who is president and general manager of the company. Mr. Palmer is president of the Akron city council, and has had many years experience in the rubber business, being actively engaged in the manufacture of both solid and pneumatic tires. His invention of this sectional tire is the result of years of constant study as to the best practical method of overcoming the difficulties encount-

ered in the use of heavy motor truck tires. A. W. Hawkins, a prominent business man and manufacturer, is secretary and treasurer of the company. The new tire is regarded as having an important future.

Another new Akron rubber company is the Empire Rubber Manufacturing Co., organized by C. W. Wickline, M. G. Snyder, William J. Yeager, Forest Firestone, and Fred J. Gostlin. The company will make rubber goods, chiefly automobile supplies and rubber cements, at a factory at No. 200 East Exchange street, with offices in the Walsh block.

The annual outing of The Diamond Rubber Co. was held at Meyers lake, Canton, on July 25, when five special trains were run over the Baltimore and Ohio railroad, and many went by interurban cars. It was one of the largest picnics in the history of the company, and the day passed off without an accident. A sport program occupied the day. The annual outing of The B. F. Goodrich Co. occurred a week later, on August 1, and over 15,000 people were on the Silver lake grounds, where the picnic was held. The company furnished tickets to and from the grounds, and included admission, one boat ride, and dancing. A sport program began in the forenoon and lasted all day, concluding with a balloon ascension in the evening. Trap shooting was another unusual sport. The Alkali and American Hard Rubber companies joined in with the Goodrich company.

At the annual meeting of the Firestone Tire and Rubber Co. on August 26, it is understood that President Firestone will report an increase in business of 33 per cent. over last year. The company are preparing to add to their plant a four-story building 125 × 75 feet.

The Aladdin Rubber Co., whose plant at Barberton burned a year ago, resumed operations on August 1. The plant has been rebuilt, and sufficient machinery placed in it to double its former capacity. The company has been reorganized, but James Christy, the chief factor financially before, remains as president and general manager. The company is getting started again on a large reclaiming business.

Mr. Walter Hazlett, manager of the Akron Rubber Co.'s office in Pittsburgh, and Miss Bessie Harry, of Akron, were married in this city on August 10.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THE merchants in the rubber lines assert this month that business is fairly good, and there is a show of some improvement, which they believe to be permanent. Many things point to advancement on the Pacific coast. Railroad construction is being carried on extensively, not only in and about San Francisco, but throughout the interior, where interurban electric railroads are becoming very common. Building is going on steadily and extensively in San Francisco. Business is better in nearly all lines than it was two months ago. It is not anticipated that there will be much in the way of milling business, although there is to be a meeting of the mill owners shortly to discuss the advisability of having a winter run, in which case there will be considerable business in this field for the San Francisco rubber houses.

Mr. W. F. Bowers, of the Bowers Rubber Works, introduced an innovation on this coast by giving a big picnic to all of their employes. The picnic took place on August 1, and the men were given full pay for the day. Mr. Bowers chartered the steamer *Carolina*, and took the employes—nearly 200—up the Sacramento river to one of the islands. There they had a big banquet prepared by a special caterer. A band on board supplied music, and there was dancing aboard and ashore. The party returned at 10 o'clock in the evening. This outing was called the first annual picnic, which indicates that such occasions are to be of regular annual occurrence.

Messrs. Kanzee and Ralph, proprietors of the Phoenix Rubber Co., are now busily engaged in removing their works and offices from temporary quarters to their new location at Nos. 108-172 First street, where they have leased a 4-story brick building and basement. The top floor will be used for factory—mold work, etc.—the next for their mechanical department, the next for their tire department, and the ground floor will be devoted to offices and leather belting, and samples. This firm is turning out its new patent disinfectant toilet seats in large numbers.

The Garlock Packing Co., at No. 670 Howard street, report a fair increase in business from their down town location.

C. R. Winslow & Co., No. 658 Howard street, agents for the Boston Rubber Shoe Co., and lines of rubber and oiled clothing, are now settled in their new four-story and basement brick building, and report that the outlook for fall business is favorable.

C. E. Mathews, Pacific coast manager of The Diamond Rubber Company, has just returned from a trip to Los Angeles, where he attended to the enlarging and rearranging of the branch store in that city. Business has increased to such an extent that larger quarters became a necessity. The new store is located at No. 1207 South Main street.

The Pacific Mill and Mine Supply Co. have moved to new and more commodious quarters at No. 516 Mission street.

The Western Belting and Hose Co., of this city, now have the Pacific coast agency of the Manhattan Rubber Manufacturing Co. (New York).

Joseph V. Selby, Pacific coast representative of the Boston Woven Hose and Rubber Co., reports business generally as fair. Mr. Selby is president of the Western Mechanical Rubber Goods Association, and he anticipates a renewal of the regular monthly meetings of this organization at an early date.

Mr. H. C. Norton, president of the Pacific Rubber Co., reports a little improvement in business.

Mr. W. J. Gorham, of the Gorham Rubber Co., will return from his Eastern trip about the first of September. Mr. Sargeant reports that everybody feels that trade is in a better condition than it was a short time ago. Mr. Parish is on his way to Japan, China and Manila, on a trip which will last two or three months. William B. Heckman, sales manager, is on his Eastern trip.

Maurice Gibson, formerly with the Sterling Rubber Co., is now employed with The Fisk Rubber Co.

Mr. Perkins, president of the Sterling Rubber Co., states that orders are coming in more freely now than they have for a long time past.

Mr. W. D. Newerf, manager of the branch of the Goodyear Tire and Rubber Co., at Los Angeles, has returned to that city from the East. At Akron he attended the conference of the Goodyear agents, held for the purpose of discussing the policy of the company during the coming year.

A GOOD BOOK ON BRAZIL.

THE BRAZILIAN YEAR BOOK, ISSUED UNDER THE PATRONAGE of the Brazilian Government. First issue—1908. Compiled and edited by J. P. Wileman, editor of *The Brazilian Review* and Director of the Commercial Statistical Service of Brazil. Rio de Janeiro; 1908. [Cloth. 8vo. Pp. xxiv + 777. Price, 2 guineas \$10.22.]

THE comprehensive character of this book and its general excellence could hardly have been more marked after years of effort, although it is, as stated in the title, the first yearly issue. Mr. Wileman, however, as editor of an important financial paper at the Brazilian capital for a number of years, has become so well informed in regard to the financial, commercial, and industrial conditions of the nation that he has addressed himself to the compilation of this work as anything but a novice. That Brazil is no unimportant factor in the world's progress, even a cursory glance at this volume will show. In the matter of area it is only slightly less than the United States. The distance from the national capital to Manaus, the rubber center, is 3,204 miles, and there are other places of commercial importance in the coun-

try even more remote. There is a much wider range of commerce in Brazil than many readers probably are aware of. The export list is not so large in the number of items, but practically everything manufactured seems to be included among the imports. Speaking of exports, the statistics of rubber are given from 1827, when the transactions included only 69,003 pounds, of the estimated value of £1053 [= \$5,124.42]. The development of planting as well as of commerce and transportation throughout Brazil has been promoted largely with foreign capital, mainly through joint stock companies, of which an extensive list is given in this book with a most satisfactory fullness of details as to their conditions. Such companies, for instance, are the American companies now improving the harbor at Pará and building the Madeira-Mamoré railway. Ample details are given likewise regarding the public debts, which are created by the several states rather than by the federal government. Any one wishing to become acquainted with actual conditions in Brazil cannot hope to find in any dozen other sources so much information so well arranged and apparently so authentic as in this volume. A good map of the country is included, and the appearance of the book generally is exceedingly pleasing.

NEW TRADE PUBLICATIONS.

FRANCIS SHAW & CO. (Bradford, Manchester, England), have issued an illustrated catalogue of Rubber Plantation Machinery, which is the most extensive publication of the kind that has yet appeared, and affords marked evidence of the growing importance of rubber culture and the new demand for mechanical appliances that has resulted. In addition to standard washing machines, breaking-up machines, crepeing machines, and the like, there is shown a small washing or sheeting machine for experimental work; also blocking presses, drying stoves, and power attachments. [65" x 7 1/4". 24 pages.]

BARTON PACKING AND RUBBER CO. (San Francisco), a new firm, issue a catalogue and price list of Belting, Packing, Hose, Molded Rubber Goods and General Mill Supplies, of which they carry in stock lines from leading manufacturers, in addition to special packings made in their own factory. [5" x 7 3/4". 127 pages.]

LEWIS P. ROSS (Rochester, New York), issues an illustrated net price catalogue, for 1908-09, of rubber footwear, including the Goodyear Glove and other leading manufacturers' brands, and several special brands which the house of Ross has made popular. [5" x 8". 44 pages.]

THE 1908-09 Catalogue of THE OHIO RUBBER CO. (Cleveland and Cincinnati) bears the title "Buckeye Brand" Waterproof Clothing, and like its predecessors is interesting and attractive. [5 3/8" x 7 3/4". 24 pages.] It is accompanied by a Net Price List for dealers.

ALSO RECEIVED.

A. J. REACH Co., Philadelphia. = Fall and Winter Sports. 1908-09. 32 pages.

Barrett Manufacturing Co., New York. = Tarvia, the Dust Layer. 24 pages.

The Perkins-Campbell Co., Cincinnati. = The Famous Twentieth Century Tire Protectors for Automobiles. 16 pages.

Frank Mossburg Co., Attleboro, Massachusetts. = Metal Reels and Spools. 24 pages.

Queen City Supply Co., Cincinnati = Supplies [rubber and other; for machinists, mills, etc.] 16 pages.

The Wire and Telephone Co. of America, Rome, New York = Copper History (as told in prices). 4 pages.

The Western Specialty Manufacturing Co., New York = "The Little Wonder" Syringe and Hot Water Bag combined. 12 pages.

The Eastern Coupling Co., Camden, Maine = The Andersen Coupler. 20 pages. Catalogue No. 2. 31 pages.

Parker Brothers, Inc., Salem and New York = The Story of Diabolo. 12 pages.

The Western Specialty Manufacturing Co., New York = "The Little Wonder" Syringe and Hot Water Bag combined. 14 pages.

The Fisk Rubber Co., Chicopee Falls, Massachusetts. = A Word to the Wise. [A Few Words of Advice on the Care and Repair of Tires.] 20 pages.

News of the American Rubber Trade.

SHARES OF RUBBER GOODS COMPANY.

THE governing committee of the New York Stock Exchange on July 29 directed the admission to the list of 34,139 shares of the 7 per cent. cumulative preferred stock of the Rubber Goods Manufacturing Co., of the par value of \$3,413,900. Originally all the shares of the Rubber Goods company were admitted to the "unlisted" department of the Stock Exchange. From time to time such shares of the Rubber Goods company as were acquired by the United States Rubber Co.—the merger of the two companies dates from 1905—ceased to be traded in on the Stock Exchange, until there remained only 34,139 shares of preferred stock, the quantity above referred to. These have now been transferred from the "unlisted" to the "listed" department of the Stock Exchange. From the above it may be inferred that the share capital of the Rubber Goods Manufacturing Co. has been acquired as follows:

	Total.	Acquired.
Preferred stock.....	\$10,351,400	\$6,937,500
Common stock.....	10,941,700	10,941,700
Total.....	\$27,293,100	\$23,879,200

The directors of the Rubber Goods Manufacturing Co., at a meeting held on July 10, 1908, in connection with listing their shares on the Stock Exchange, "Resolved, that this company shall not speculate in its own securities or in those of its constituent companies, or permit similar speculations by any of its constituent companies."

It is understood that application has been made for listing the securities of the United States Rubber Co. upon the Paris bourse. This, it is said, will be the first instance of American industrial shares being traded in on the French market under like conditions. While no authorized statement has been made public it is gossip in financial circles that the opening of continental markets to those securities is expected to lead to the transfer of \$10,000,000 or more of them to Europe.

THE refunding of the debenture bonds of the Boston Rubber Shoe Co., due on August 1, was carried out as intimated in the last annual report of the United States Rubber Co. [See THE INDIA RUBBER WORLD, June 1, 1908—page 209]. Of the \$4,500,000 in bonds of the new issue underwritten by the bankers it is

understood that all except about \$3,500,000 were taken by holders of the old bonds.

PARKER, STEARNS & CO.'S NEW FACTORY.

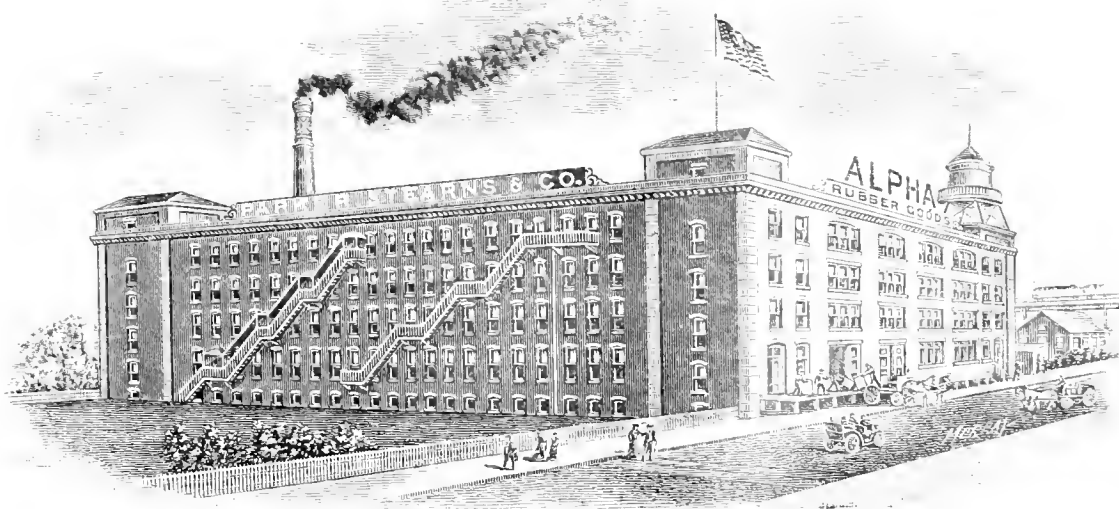
THE new factory of Parker, Stearns & Co. (New York), in Brooklyn, in which they expect to be installed early in November, is one of the completest and best equipped rubber goods plants yet projected. It is a four-story brick building with a light, spacious basement, 100 feet long by 110 feet in its extreme width. It is of the latest mill construction throughout. It has for water supply a huge cistern fed by an artesian well, the water being of exceptional purity. Besides this cistern there are two roof tanks, holding some 10,000 gallons, and another one building for some 10,000 gallons more. There is also city water, if it is needed. The factory has its own electric lighting plant, is sprinkled throughout and equipped with electric elevators and electric motors for the small machines. The power equipment consists of two 150 H.P. boilers, and another 200 H.P. boiler is being installed. The engines are one 100 H.P., one 125 H.P., and one 250 H.P. Corliss, with provision for another of 200 H.P. The plant is located in a part of Brooklyn where the very best of help may be secured; it is convenient to the Long Island Railroad, and is easily reached by the Brooklyn Elevated trains.

The business of the firm, now established nearly thirty years, has outgrown the premises so long occupied in South and Water streets, in the borough of Manhattan, New York, and which eventually will be vacated altogether.

JENKINS RUBBER CO.—FIRE.

THE main building of the Jenkins Rubber Co.'s factory, at Elizabeth, New Jersey, was destroyed by fire early in the morning of August 6. The offices of the company and an adjoining building in which was stored \$50,000 of rubber, were saved. The engine house was also saved in part, but the machinery was badly warped by the heat. It is not clear how the fire originated. The insurance carried amounted to \$116,000, which, it is understood, will cover the loss. The company will at once rebuild, on the same site, with twice the former capacity.

The business of this company grew out of the Tuttle Rubber Works (Holyoke, Massachusetts), the whole output of which was taken by Jenkins Brothers, an extensive packing firm of New



NEW RUBBER FACTORY OF PARKER, STEARNS & CO., NEW YORK.

York. On the death of the late John H. Tuttle, in 1894, the Holyoke factory was offered for sale at auction and purchased by the Jenkins firm, who continued it in operation under the name of Jenkins Rubber Co. In 1897 the rubber factory was transferred to Elizabeth, N. J., ground having been bought and buildings erected for the purpose, and the Jenkins Rubber Co. became a corporation under the laws of New Jersey. Its business has continued to be the production of rubber valves and the like for the trade of Jenkins Brothers.

MR. MINER'S NEW RUBBER FACTORY.

AN extensive new factory building which has been in course of erection at Granby, Quebec, for some weeks past, has been the object of much local interest, but until within the past month no public announcement was made of its purpose. On a report coming out that it is being erected by Mr. S. H. C. Miner, for a rubber footwear factory, great satisfaction was expressed by the Granby people, in view of the success of all of Mr. Miner's enterprises, not the least important of which, in the past, had been in the rubber industry. At last accounts the first story of the main building had been constructed. The Birmingham Iron Foundry was mentioned as having been given an important order for machinery, and plans were being made for the installation of electrical equipment.

THE VICTOR RUBBER CO. REBUILDING.

THE Victor Rubber Co. (Springfield, Ohio), whose factory at Snyderville was burned recently [see THE INDIA RUBBER WORLD, August 1, 1908—page 383], have commenced the construction of new factory buildings at a new location, within the city of Springfield, and expect to have the plant in operation by November 1. They have bought land enough to permit of the one-story plan of construction throughout, the buildings being of concrete, with concrete floors, steel trusses, and fireproof roof. The location with respect to railroads is such that all goods can be received or shipped without the delay and cost of drayage. The machinery and power plant will be the most modern and efficient that the market affords.

FROM CHICAGO TO SAN FRANCISCO.

MR. JOHN H. BROWN has retired from the position of associate manager at Chicago of the Gutta Percha and Rubber Manufacturing Co., after having filled it just 25 years, to accept an important position with the same company on the Pacific coast. At the Union League Club, in Chicago, on August 17, a lunch was given to Mr. Brown by his friends in the rubber trade, the occasion being an entire surprise to him. The meeting at the club was entirely informal, but Mr. Brown thanked his contemporaries in a feeling speech, and the meeting developed into a love feast in which many kind things were said of the guest and many stories told of old associations and experiences in Chicago. Hardly a rubber house in Chicago is existing to-day under the same name and management as at the time Mr. Brown entered upon his duties 25 years ago. Many of the jobbing houses have retired from business, and but few of the "old guard" remain.

APSLEY RUBBER CO.—IMPROVEMENTS.

THE Apsley Rubber Co. (Hudson, Massachusetts) have installed grates under their factory boilers for the burning of hard coal screenings instead of soft coal, with satisfactory results in the matter of fuel cost and otherwise. All the draught for the fire is blown by steam, instead of obtaining it from doors underneath as formerly. In fact, the doors under the firebox are closed all the time.

Mr. L. D. Apsley, president of the Apsley Rubber Co., has been on a business trip through the West, going as far as Seattle, in connection with the important Pacific coast interests of his company.

The factory of the Apsley Rubber Co. was visited lately by a party of salesmen from the important shoe firm of De Cau Brothers Co., of Philadelphia, who are distributors of the Apsley company's footwear. The visitors were entertained by President

Apsley, of the company, assisted by Treasurer Loughton, the program including dinner and attendance at a Boston theater in the evening.

THE FEDERAL RUBBER CO. BUSY.

THE Federal Rubber Co. (Milwaukee, Wisconsin), report that of late it has been necessary to run their factory overtime, to take care of the orders received for sheet packing, horseshoe pads, and automobile inner tubes.

About 160 employees of the Federal Rubber Co. enjoyed their annual outing on August 1, at Hilgen's Spray Park, Cedarburg, Wis. The day was spent in athletic sports, boating, dancing, etc., to the pleasure of all concerned.

E. L. Holly, who has become connected with the sales department of the Federal Rubber Co., formerly held a similar position with The Diamond Rubber Co.

MILFORD RUBBER CO.—LIQUIDATION.

THE Milford Rubber Co. (Boston), the closing of whose waterproofing plant at Milford, Massachusetts, was reported last month, have presented to the superior court in Boston a petition asking for the privilege of dissolution. The company are stated to have no indebtedness, and the directors at a regular meeting decided to discontinue business. The order of notice is returnable before the court on September 7. A report that the company's factory would be removed to Worcester, Mass., appears without foundation.

TRADE NEWS NOTES.

THE fortnightly meetings of the Rubber Reclaimers' Club, at the Hotel Belmont, in New York, continue to be well attended, with pleasing and satisfactory results. At one of the recent meetings the usual program was departed from, and the members were the guests of one of their number at Point Shirley Club, Winthrop, Massachusetts.

The patent controversy, long in the courts, regarding pin hose racks between C. M. Howard, Washington, D. C., and the W. D. Allen Manufacturing Co., Chicago, has been decided by the United States circuit court of appeals in favor of the W. D. Allen Manufacturing Co.

The factory of the American Rubber Co. (Boston) was closed on August 12 for a two weeks' vacation and inventory.

The Bentley & Olmstead Co., large distributors of rubber and other footwear at Des Moines, Ia., are enlarging the branch which they have maintained for a year past at Wichita, Kansas.



THE RUBBER TRADE IN CANADA.

[Photograph taken in front of the factories of The Canadian Rubber Co. of Montreal, Limited, showing some of the officials of the company in the large automobile used in calling upon the Montreal tire trade. In the large automobile used in calling upon the Montreal tire trade. In the tonneau is Mr. Frank A. Paulin, manager of the tire department. Those in the rear seat (counting from this side) are Mr. J. C. Nicholson, manager of the general rubber goods department; Mr. J. M. S. Carroll, manager of the Montreal sales branch; and Mr. F. E. Partridge, mechanical factory superintendent.]

OFFICERS OF THE CONTINENTAL RUBBER CO.

THERE have been some changes in the list of officers of the Continental Rubber Co. (New York), following the resignation as president of Mr. Howard Page, who has gone to Europe for a long vacation. Mr. Page remains on the board, however. The officers now are:

President—WILLIAM H. STANTON (formerly vice president).

Vice President and Treasurer—EDWARD B. ALDRICH. (Treasurer from the beginning, and now filling two offices.)

Secretary—C. B. REID.

General Manager [a new office]—WALTER DUTTON (formerly auditor of the company).

The same official list applies to two other corporations: (1) Continental-Mexican Rubber Co., having in charge the manufacturing interests in Mexico of the Continental Rubber Co., and (2) Compania Ganadera y Textil de Cedros, a cattle and fiber company operating on the hacienda "Cedros" in the Mexican state of Zacatecas.

A CORRECTION.

THE Atlantic Rubber Co. (Hyde Park, Massachusetts), through an inadvertence, was mentioned in THE INDIA RUBBER WORLD in July as being engaged in the manufacture of rubber clothing. Their principal business is the rubber-proofing of all kinds of fabrics, including single, double and triple textures; rubber heels and molded specialties; rubber sheeting, dress shields, bathing caps and various toilet specialties. The present company was incorporated under the laws of Massachusetts in January, 1908. F. H. Stratton is president, Alfred A. McLaren treasurer, and S. W. Culver, clerk. The factory and principal offices are located at Hyde Park.

NEW GOODRICH PREMISES IN NEW YORK.

THE B. F. Goodrich Co. (Akron, Ohio) have purchased property in New York, upon which they purpose erecting a large building for the purposes of their branch in this city. The purchase was made from the Marsh estate, and embraces Nos. 1776-1778 Broadway, at Fifty-seventh street. The insignificant structures now on the ground—irregularly shaped and measuring 53.10x132.1 and 50x100.5—will be replaced probably by a six-story modern structure.

NEW INCORPORATIONS.

AMERICAN Rubber Reclaiming Co., Inc., June 30, 1908, under the laws of Pennsylvania; capital authorized, \$100,000. Incorporators and directors: John R. Livezey (president); Joseph R. Livezey, William A. Flanagan, William R. Taylor and John Oxford (treasurer). The new company have acquired the business of the Manufacturers' Co., reclaimers of rubber by a non-acid process, with mills at Germantown and Kensington, Philadelphia.

Palmer-Hawkins Rubber Tire Co., June 22, 1908, under the laws of Ohio; capital, \$1,000. Incorporators: M. R. Palmer, N. M. Palmer, George N. Hawkins, E. P. Otis, E. E. Otis—all of Akron, Ohio.

Tire-Life Co., July 6, 1908, under the laws of Delaware; authorized capital, \$500,000. Incorporators: William H. Sterling and Montaigu M. Sterling, Brooklyn, N. Y., and Samuel G. Meetser, New York city.

Perfection Emergency Tire Co., licensed August 10, 1908, under the laws of Illinois; capital, \$25,000. Incorporators: G. C. Grable, W. R. Hartley, and D. W. Norris.

National Insulite Co., licensed August 4, 1908, under the laws of Illinois; capital, \$25,000. Incorporators: A. H. Mikesell, A. M. Scott, and John K. Newhall. Principal office: Aurora, Ill.

Kerite Insulated Wire and Cable Co., July 30, 1908, under the laws of New York; capital, \$500,000. To succeed to the business long conducted by W. R. Brixey, at Seymour, Connecticut, and in New York city. Incorporators: Richard D. Brixey, Seymour; Reginald W. Brixey, No. 2 Rector street, New York; and Abel Crook, Brooklyn, N. Y.

Calmon A-bestos and Rubber Works of America, August 10, 1908, under the laws of New York; capital, \$25,000. Incorporators: Edward H. Garcin, Rudolf Gaertner, and Rudolph Gruber, all of New York city. Advance particulars appeared in THE INDIA RUBBER WORLD, August 1 (page 381).

Sectional Rubber Tire Co., August 26, 1908, under the laws of Massachusetts; capital, \$50,000. A. H. Cushing, Brookline, treasurer; W. T. Simpson, South Weymouth, clerk.

Knickerbocker Tire and Repair Co., August 15, 1908, under the New York laws; capital, \$10,000. Incorporators: William J. Staunton, No. 321 Pacific avenue, Jersey City, New Jersey; John J. Walsh and Charles P. Bispham, New York city.

A. G. Spalding & Brothers, August 13, 1908, under the laws of Maine; capital, \$500,000. To deal in sporting goods. The incorporators include J. W. Spalding, Monmouth Beach, New Jersey; William T. Brown, East Orange, N. J., and Paul Walton, Ridgewood, N. J.

PERSONAL MENTION.

MR. HENRY C. PEARSON, editor of THE INDIA RUBBER WORLD and delegate from the New England Rubber Club to the International Rubber and Allied Trades Exhibition to be held this month in the Olympia, London, sailed from New York on the *Minnehaha* on August 22, and will remain abroad so long as the exhibition is in progress.

President Samuel P. Colt, of the United States Rubber Co., spent the month past at Jackson, New Hampshire. Secretary Samuel Norris, of the same company, spent his vacation in the Adirondacks. Treasurer John J. Watson, Jr., spent some of the heated term at Lake Mohonk, New York. Manager of Sales Edward R. Rice was in London recently, planning to go to the Continent.

Mr. Eben H. Paine, the resident director in London of The United States Rubber Co., has ended his summer vacation on this side of the Atlantic.

Mr. James Bi-hop Ford, first vice president of the United States Rubber Co., with his schooner yacht *Katrina*, took part in the annual cruise of the New York Yacht Club, starting from New London, Connecticut, on August 7.

The will of the late Charles H. Dale, president of the Rubber Goods Manufacturing Co., filed in the surrogate's court in Westchester county, New York, on August 3, bequeaths to the widow his entire estate. The value is not stated, but has been estimated at about \$2,500,000. Mrs. Dale is appointed sole executrix.

August Johnston, of New York, engaged in the india-rubber and gutta-percha machinery trade, is making a two-months' visit to Europe, particularly to Sweden, his native country, though he will look into the rubber business elsewhere on the continent.

His excellency, Wu Ting-fang, the Chinese ambassador at Washington, paid a visit recently to Butler, New Jersey, and was shown through the work of the American Hard Rubber Co.

Mr. Tracy S. Lewis, treasurer of the Beacon Falls Rubber Shoe Co. (Beacon Falls, Connecticut), arrived at home during the month from six weeks' absence in Europe.

TRADE NEWS NOTES.

THE directors of the Boston Woven Hose and Rubber Co. have declared a semi-annual dividend of \$4 per share on the common stock, payable September 15, to stockholders of record September 5.

James Gray, for several years superintendent of the Joseph Banigan Rubber Co., has accepted the position of superintendent of the factory of the Merchants Rubber Co., Limited, rubber footwear manufacturers at Berlin, Canada. Mr. Gray was connected with the Woonsocket and Banigan companies altogether for 30 years.

The Apsley Rubber Co. (Hudson, Massachusetts) have resumed work after the annual summer shutdown for inventory and repairs.

TRADE NEWS NOTES.

At the recent great mining exhibition at Olympia, London, were shown two Robbins belt conveyors in operation, handling ores and the like. In care of one of the belts the material passed over an automatic weighing machine. This was Merriek's patent conveyor weightometer, and was one of the first of its kind exhibited.

Business is reported very good at the works of the National India-Rubber Co. (Bristol, Rhode Island), particularly in the insulated wire department, where some very large orders are in hand.

Mr. John E. Dickson has resigned as representative in Chicago of the Cincinnati Rubber Manufacturing Co., to become Western manager for the Trenton Rubber Manufacturing Co., with headquarters at No. 253 LaSalle street, Chicago.

At a recent second convention of the selling force of Batchelder & Lincoln Co., extensive jobbers of leather and rubber footwear, of Boston, Mr. William H. Palmer, of the sales department of the Boston Rubber Shoe Co., gave a talk on the way in which his department is run, and gave details regarding the business relations of the two companies, mentioning that Batchelder & Lincoln Co. have been longer on the list of customers of the rubber company than any other firm, the connection having existed for more than 50 years. Mr. Walter E. Piper, superintendent of one of the factories of the Boston Rubber Shoe Co., explained the principal details of the rubber shoe manufacture, illustrating his remarks with samples of the materials used and specimens of footwear in various stages of manufacture.

THE president of the Women's League of New York State, who estimated recently that about 75,000 women in the State who usually work for wages or salaries were out of employment, reports prospects favorable for the number being materially reduced during the next month or so, owing to improved business conditions. The work of the league has been confined not so much to providing positions for women as to finding where they can go to get them. A recent report of the league mentions that "The B. F. Goodrich Co. (the rubber manufacturers of Akron, Ohio) wanted to know how many women from New York were willing to go there."

In regard to the financial situation Albert B. Beers (broker in crude rubber and commercial paper, No. 68 William street, New York), advises as follows: "General money market conditions have continued easy through August, and there has been a fairly good demand for paper, the usual run of rubber names ruling at 4 to 5 per cent. for the best and 5½ to 6 per cent. for those not so well known. The demand is likely to fall off somewhat in the course of the next month or two."



JOSEPH DIXON CRUCIBLE CO.'S FACTORY.

[The photograph taken during the erection of an important addition to the Jersey City, New Jersey. In the buildings shown is included the factory for erasers and such like goods.]

VULCOLE.

A VERY curious and unusual assistant for rubber compounds has just come into the market, under the name of Vulcole. It seems to have such an effect on sulphur in the compound that sulphur may be put in as a compounding ingredient, very much as one would put in whiting, with the probable effect that the fused sulphur, instead of lessening the elasticity as in the case of whiting, leaves it the same as if the compound were pure gum. For example, it is said that a compound consisting of 10 pounds fine Pará, 7½ pounds sulphur, 8 ounces lime, 3 pounds litharge, and 6 ounces vulcole, cured in a mold 15 minutes at 45 pounds of steam, gives a soft rubber with an elasticity of 7 to 1. Samples made six months ago are apparently as good as when they left the molds. Another point is that the goods come out of the molds without the necessity of soaping, the impression being wonderfully clear.

Vulcole, added to a non-blooming compound, reduces the time of cure at least two-thirds, so it is said, which would seem paradoxical in the face of the statement that 75 per cent. of sulphur with Vulcole added makes a soft compound in a 15 minutes cure. The new product is manufactured by the American Vulcole Co., of which Mr. W. C. Coleman, of Boston, is sales agent.

SOME WANTS OF THE RUBBER TRADE.

[459] "CAN you tell us who manufactures a rubber guard to fit on the paddles for canoes, to prevent the water from running back on the hand?"

[460] "Can you advise us of a concern manufacturing erasing rubbers in the United States?"

[461] "Kindly furnish us with the names of manufacturers of rubber tools; such as scratchers, hand rollers, etc."

[462] "Kindly furnish us with a list of the different manufacturers who would be apt to use the following scrap: Hard rubber, solid; hard rubber shavings; soft rubber scrap, cured and uncured; cloth inserted scrap, cured and uncured."

LOWER COTTON YIELD IN EGYPT.

THE production of cotton in Egypt appears not to have kept pace with the area planted, according to a report of the Egyptian Cotton Commission, printed in the *Alexandria Gazette*. While the actual reported production increase from an average of 583,703,515 pounds for the three years 1896-1898 to an average of 634,660,951 pounds in the years 1905-1907, the yearly annual yield per acre has declined about 24 per cent.—from 538 to 410 pounds. This is said to be due to too constant cropping with cotton, the deterioration of the plant, the increase of the insect pests, and the lack of fertilizers. The cotton commission hope to remedy these ills.

RUBBER shoes imported into Chile are valued arbitrarily at the custom house at \$1.40 (gold) per kilogram [=66.2 ⅓ cents per pound], and the duty assessed is 25 per cent. *ad valorem*. The reduction in duties on most kinds of footwear which went into effect under the presidential decree of March 21, 1908, does not apply to rubber boots and shoes.

THE London *Financial Times* hears from Paris: "Advices from the French Congo state that a crisis has arisen in the india-rubber trade there. Exports are diminishing considerably, in consequence of higher prices, and fears are expressed by the authorities of the colony that financial uneasiness may follow."

THE working expenses of the Electromobile Cab Co., of Berlin, were substantially reduced during 1907, the diminution in the maintenance of tires having alone been 27 per cent.

INDIA-RUBBER MISCELLANY.

AN EAST INDIAN RUBBER SYNDICATE.

THE R. I. has been organized, with headquarters at Batavia, Algemeen Nederlandsch-Indisch Rubber Syndicaat (General Dutch Indies Rubber Syndicate), for the purpose of offering its services for the management and administration of enterprises for the cultivation of rubber, for drawing up estimates and accounts, and for making reports. The names of those responsible for the control of the syndicate are not stated, but it would seem to be a credible concern from the prominence with which it appears in the representation of Dutch colonial interests at the London Rubber Exhibition.

PROGRESS IN BRITISH NORTH BORNEO.

At the fifty-first half yearly meeting of the British North Borneo Co. (London, July 28) the chairman referred to rubber culture in optimistic terms. The company hold shares in two of the five rubber companies which are operating within their territory, and indicated an intention to aid in the formation of more such companies. He said: "We decided, a few months ago, to commence rubber planting on our own account on the railway. After a certain amount of development it is our intention to sell our estate to a company as a going concern. Then we shall again, in a similar manner, pave the way for another company, and from time to time continue the process, as there is practically no limit to the land in our territory which is suitable for the cultivation of rubber." The income of the British North Borneo Co. was larger in 1907 (£145,816 4s. 6d.) than in any former year, and the dividend rate advanced from 3 to 4 per cent. An account of the rubber planting companies on their territories was given in THE INDIA RUBBER WORLD, September 1, 1907 (page 399).

A MUSEUM RUBBER GUIDE.

THE authorities of the Koloniaal Museum at Haarlem, Netherlands, maintain a series of descriptive catalogues or handbooks of the principal economic products contained in the museum, which are exceptionally thorough and well prepared. A second edition of the catalogue on "Caoutchouc Getah-Peritja en Balata" has been brought out, having on the title page the name of A. Slingervoet Ramondt, a chemist connected with the technical high school at Delft, whose "Geschichte der Kautschukforschung" was reviewed recently in these pages. Herr Ramondt, by the way, is a member of the Netherlands committee for the London Rubber Exhibition this month. The museum handbook referred to embraces a historical summary of the materials described, their botanical sources, chemical analyses, and the technical processes employed in utilizing the materials. [12mo, pp. 71. 24 cents.]

LIGHTING A RUBBER CAPITAL.

THE latest yearly report of the Pará Electric Railway and Lighting Co., Limited, attributes the company's failure to do better during the year to the financial crisis growing out of the rubber situation. "The product was very largely sold in the United States," says the report, "and the recent panic there paralyzed the trade." Better things are hoped for, however, now that horses and mules have been wholly retired from the Pará tramways, and the whole 35 miles (single line) are operated electrically, with an equipment of 68 motor cars. Besides, the company have a promising business in the supplying of electric light and power.

A PLEA FOR RUBBER STOPPERS.

SOMEbody writes to the *Pharmaceutical Era* urging the formation of a Rubber Stopper League, "to be composed of retail druggists who will band themselves to buy their syringes, extracts, exudates and any other thing suitable, of the makers who use rubber stoppers, rather than from those hightoned ones who will still use corks. I hope also that you will point out, in season and out of season, the value of the rubber stopper as a means of grace. Probably every man in the trade has lost his temper many, many times when, busy and alone, or short-handed, two or three corks of such bottles have broken short off."

DEATH OF PRESIDENT COLT'S BROTHER.

GEORGE DEWOLF COLT died at his home in New York on July 27, after having been in declining health for two years. He was born in Hartford, Connecticut, September 18, 1838, being the eldest son of Christopher and Theodora G. (DeWolf) Colt. In early life he engaged in business in New Orleans, from which he retired in time, and during the last 25 years he had resided in New York. He is survived by two brothers, Colonel Samuel Pomeroy Colt, president of the United States Rubber Co., and Judge Le Baron B. Colt, of the United States circuit court of the first circuit, and a sister, Mrs. Francesca E. DeWolf, who is now in Switzerland. The interment was at Bristol, Rhode Island, in the family lot at Juniper Hill cemetery, after funeral services at the residence of Colonel Samuel P. Colt.

UNITED STATES RUBBER CO.'S SHARES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending August 22:

COMMON STOCK.

Week August 1	Sales	7,600 shares	High	31 ³ / ₄	Low	27 ¹ / ₂
Week August 8	Sales	17,235 shares	High	37 ¹ / ₂	Low	31 ¹ / ₂
Week August 15	Sales	6,475 shares	High	37 ¹ / ₈	Low	32 ³ / ₄
Week August 22	Sales	1,400 shares	High	34	Low	32 ³ / ₄
For the year—High, 37 ¹ / ₂ ; Aug. 7; Low, 17 ¹ / ₂ ; Feb. 26.						
Last year—High, 32 ¹ / ₂ ; Low, 13 ¹ / ₂ .						

FIRST PREFERRED STOCK.

Week August 1	Sales	1,800 shares	High	98	Low	96 ¹ / ₄
Week August 8	Sales	4,378 shares	High	102 ³ / ₄	Low	98 ³ / ₄
Week August 15	Sales	3,000 shares	High	102 ¹ / ₄	Low	99 ¹ / ₄
Week August 22	Sales	800 shares	High	101	Low	99 ¹ / ₂
For the year—High, 102 ³ / ₄ ; Aug. 7; Low, 76; Feb. 19.						
Last year—High, 100 ⁷ / ₈ ; Low, 67 ¹ / ₂ .						

SECOND PREFERRED STOCK.

Week August 1	Sales	100 shares	High	64	Low	64
Week August 8	Sales	1,000 shares	High	74	Low	70
Week August 15	Sales	1,000 shares	High	71	Low	71
Week August 22	Sales	100 shares	High	72	Low	72
For the year—High, 74; Aug. 7; Low, 42; Feb. 21.						
Last year—High, 78 ¹ / ₂ ; Low, 39.						

IN addition to his work as consulting and contracting engineer to the rubber trade, Mr. M. P. Fillingham (No. 2 Rector street, New York) has taken on the manufacture of vulcanizing machinery in general. His long connection with some of the largest manufacturers of such machinery, and with the rubber business, has rendered him well informed as to the requirements of the trade. Mr. Fillingham has availed himself of the advantages afforded by the large shops of the Traylor Engineering Co. (Allentown, Pennsylvania), which are admirably fitted for the prompt filling of orders for machinery.

Review of the Crude Rubber Market.

THE feature of interest in the market developed since our last report, is the return of "dollar rubber." Prices of most grades are higher than a month ago, indicating an improving demand for rubber, and likewise that supplies of some grades are being cleaned out. Imports at New

York have been large of late, of the principal classes of rubber, thus offsetting the reduced arrivals of a few months past. The mills are moderately busy, but trade in general is quiet, though not to the extent of causing apprehension. The Antwerp sale on August 26 created little interest in America.

Arrivals at the mouth of the Amazon to date are less than for the same period of the last crop season. The arrivals from the various other principal sources also were smaller, though this deficit is being made good by the increased output of plantation Pará grades from the Far East.

Following are the quotations of New York for Pará grades one year ago, one month ago, and August 20—the current date:

PARÁ.	Sept. 1, '07.	Aug. 1, '08.	Aug. 20.
Islands, fine new.....	105a 100	83a 84	80a 90
Islands, fine old.....	none here	96a	none here
Upriver, fine, new.....	110a 111	92a 92	95a 96
Upriver, fine, old.....	113a 114	94a 95	98a 100
Island, coarse, new.....	50a 60	42a 43	43a 44
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	80a 90	64a 65	68a 69
Upriver, coarse, old.....	none here	65a 66	69a 70
Caucho (Peruvian), sheet	70a 71	49a 50	50a 51
Caucho (Peruvian), ball	88a 89	60a 61	61a 62
Ceylon (plantation), fine sheet	133a 134	104a 105	103a 104

AFRICAN.

Sierra Leone, 1st quality.....	78a 80	Lopori ball, prime.....	80a 81
Massai, red.....	78a 80	Lopori strip, prime.....	62a 63
Benguella.....	43a 44	Madagascar, pinky.....	64a 65
Accra flake.....	15a 16	Ikelenba.....	none here
Cameroon ball.....	48a 49	Soudan niggers.....	54a 55

CENTRALS.

Esmerelda, sausage.....	60a 61	Mexican, scrap.....	50a 60
Guayaquil, strip.....	44a 45	Mexican, slab.....	46a 41
Nicaragua, scrap.....	50a 60	Mangabeira, sheet.....	43a 44
Panama.....	44a 45	Guayule.....	25a 26

EAST INDIAN.

Assam.....	72a 73	Borneo.....	26a 27
Late Pará cables quote:			
Per Kilo.		Per Kilo.	
Islands, fine.....	4\$100	Upriver, fine.....	5\$150
Islands, coarse.....	1\$800	Upriver, coarse.....	3\$200
Latest Manãos advices:		Exchange.....	
Upriver, fine.....	5\$250	Exchange.....	15 3/16d.
Upriver, coarse.....	3\$250		

NEW YORK RUBBER PRICES FOR JULY (NEW RUBBER).

	1908.	1907.	1906.
Upriver, fine.....	91a .06	1.08a 1.15	1.22a 1.24
Upriver, coarse.....	64a .07	.86a .00	.89a .01
Islands, fine.....	.83a .88	1.04a 1.08	1.18a 1.20
Islands, coarse.....	.42a .46	.61a .64	.64a .65
Cametá.....	.52a .55	.70a .71	.69a .71

Statistics of Para Rubber (Excluding Caucho).

NEW YORK.						
	Fine and Medium.	Coarse.	1908.	1907.	1906.	
Stocks, June 30.....	200	87 =	347	393	191	
Arrivals, July.....	903	447 =	1,350	695	980	
Aggregating.....	1103	534 =	1607	998	1171	
Deliveries, July.....	995	446 =	1411	708	1024	
Stocks, July 31.....	108	88 =	286	290	147	
PARÁ.				ENGLAND.		
	1908.	1907.	1906.	1908.	1907.	1906.
Stocks, June 30.....	373	170	30	1,235	950	905
Arrivals, July.....	1080	1090	1,300	376	525	400
Aggregating.....	1453	1200	1,330	1611	1475	1,305
Deliveries, July.....	1293	1095	954	1411	890	515
Stocks, July 31.....	250	105	376	200	975	700

	1908.	1907.	1906.
World's visible supply, July 31.....	1,022	1,050	1,841
Pará receipts, July 1 to July 31.....	1,080	1,000	1,300
Pará receipts of Caucho, same dates.....	240	230	350
Shut from Pará to United States, July 31.....	270	100	193
Shut from Pará to Europe, July 31.....	355	420	335

United States Crude Rubber Imports.

[FISCAL YEARS ENDED JUNE 30.]

	1906.	1907.	1908.
United Kingdom.....	pounds 8,918,288	9,893,471	6,809,622
Germany.....	3,400,084	4,730,257	2,821,194
Other Europe.....	8,910,897	9,381,326	6,883,473
Central American States and British Honduras.....	1,282,647	1,194,249	992,108
Mexico.....	1,795,915	7,475,007	9,269,443
Brazil.....	20,407,148	40,286,751	32,645,173
Other South America.....	1,810,742	2,030,662	1,537,887
East Indies.....	2,095,081	2,234,654	1,237,487
Other Countries.....	147,643	31,071	36,683
Total.....	57,884,345	76,963,838	62,233,160
Value.....	\$45,114,450	\$58,019,081	\$36,613,185
Average per pound.....	77.9 cents.	76.5 cents.	58.8 cents.

EXPORTS: same period.....	3,820,533	4,215,350	4,110,397
Excess of imports.....	54,054,812	72,748,488	58,122,763

Antwerp.

ANTWERP RUBBER STATISTICS FOR JULY.

DETAILS.	1908.	1907.	1906.	1905.	1904.
Stocks, June 30.....	kilos 684,866	671,793	618,834	582,086	680,515
Arrivals, in July.....	227,202	613,004	328,799	449,085	639,157
Congo sorts.....	172,828	559,144	247,197	324,993	539,159
Other sorts.....	54,374	53,860	81,602	124,122	108,998
Aggregating.....	912,368	1,284,857	947,633	1,032,071	1,328,672
Sales, in July.....	216,517	353,591	410,192	242,512	455,926
Stocks, July 31.....	695,551	931,350	531,441	810,559	872,746
Arrivals since Jan. 1.....	2,833,927	3,191,798	3,355,095	3,210,284	3,464,917
Congo sorts.....	2,430,394	2,753,722	2,560,838	2,536,630	2,847,591
Other sorts.....	403,603	438,076	794,257	673,654	617,326
Sales since Jan. 1.....	3,144,370	2,918,626	3,559,351	2,932,086	3,293,071

RUBBER ARRIVALS FROM THE CONGO.

AUGUST 4.—By the steamer *Bruxellesville*:

Bunge & Co.....	(Société Générale Africaine) kilos	61,300	
Do .....	.....	86,200	
Do	(Comptoir Commercial Congolais)	30,800	
Do	(Société Abir)	8,100	
Do	(Anvers-ise)	9,300	
Do	(Chemins de fer Grands Lacs)	4,000	
Do	(Comité Spécial Katanga)	4,000	
Do	(Cie du Kasai)	66,500	
Société Coloniale Anversoise.....	(Belge du Haut Congo)	6,000	
Do	(Cie. du Lomami)	2,800	
Do	(Société Ikelenba)	3,100	
Do .....	.....	6,700	
Société Générale de Commerce.....	(Lobay)	21,000	
L. & W. Van de Velde.....	.....	2,500	312,300

IMPORTS FROM PARÁ AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

August 6.—By the steamer <i>Cearense</i> , from Manãos and Pará.			
IMPORTERS.	Fine.	Medium.	Coarse.
General Rubber Co.....	88,500	12,100	80,200
New York Commercial Co.....	20,900	24,500	20,100
A. T. Morse & Co.....	52,500	7,200	21,500
Poel & Arnold.....	33,200	7,000	25,000
C. P. dos Santos.....	30,700	3,200	24,400
Hagemeyer & Brunn.....	20,000	.....	25,800
Edmund Reeks & Co.....	12,000	1,400	15,200
Lawrence Johnson & Co.....	13,000	.....	2,400
Total.....	281,600	55,400	232,000

August 24.—By the steamer <i>Cuthbert</i> , from Manãos and Pará:			
General Rubber Co.....	96,600	18,800	77,000
A. T. Morse & Co.....	77,000	16,800	64,400
Poel & Arnold.....	28,600	17,600	75,800
C. P. Santos.....	23,600	8,600	41,800
New York Commercial Co.....	14,300	5,400	35,300
William E. Peck & Co.....	8,900	.....	40,300
Edmund Reeks & Co.....	3,200	1,100	33,600
Hagemeyer & Brunn.....	8,000	.....	16,500
Total.....	261,700	68,300	388,600

NOTE.—The *Maranhense*, from Manãos and Pará, is due at New York on September 7, with 440 tons of rubber and 30 tons of caucho.

PARÁ RUBBER VIA EUROPE.

POUNDS.

July 25.—By the <i>Lucania</i> : Liverpool:	
New York Commercial Co (Fine).....	27,000
July 27.—By the <i>Touraine</i> : Havre:	
Poel & Arnold (Fine).....	20,000

RUBBER FLUX

No. 17. Particularly adapted to softening material for tubing machine. Almost universally used for waterproofing wire.

No. 48. For fluxing pigments in compounding. A valuable adjunct to the manufacture of moulded goods as it DOES NOT BLOW UNDER CURE.

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Sole Factors: WALPOLE RUBBER WORKS,
WALPOLE VARNISH WORKS,
ELECTRIC INSULATION LABORATORY

WE ARE OFFERING SCRAP RUBBER AT LOW PRICES



Theodore Hofeller & Company
BUFFALO, N. Y.

WE SOLICIT YOUR INQUIRIES



VULCOLE

A chemical that will actually reduce the cost of a compound 33 1/3% and not reduce its quality. Enables rubber to absorb 75% of its weight of sulphur and still vulcanize soft.

AMERICAN VULCOLE CO.

MANUFACTURING CHEMISTS. Write For Samples. 161 SUMNER ST., BOSTON, MASS.

HYDRO-CARBON

That's acknowledged Best—because it Tests 99+ % Purity. Amalgamates perfectly in vulcanizing process. Retains its flexibility at zero weather. Write for Free Samples.

AMERICAN WAX CO. : : Boston, Mass.

July 30.—By the *Patricia*=Hamburg:
Poel & Arnold (Fine)..... 22,500
New York Commercial Co. (Fine)..... 2,500 25,000

July 30.—By the *Etruria*=Liverpool:
New York Commercial Co. (Fine)..... 50,000
Poel & Arnold (Coarse)..... 20,000 70,000

July 31.—By the *Lusitania*=Liverpool:
New York Commercial Co. (Fine)..... 45,000
General Rubber Co. (Fine)..... 13,500 58,500

August 6.—By the *Umbria*=Liverpool:
Poel & Arnold (Fine)..... 75,000
C. P. Santos (Coarse)..... 2,500 77,500

August 6.—By the *Esperanza*=Mollendo:
W. R. Grace & Co. (Cauchó)..... 20,000

August 7.—By the *Pretoria*=Hamburg:
New York Commercial Co. (Fine)..... 5,000

August 7.—By the *Mauretania*=Liverpool:
A. T. Morse & Co. (Fine)..... 22,500
A. T. Morse & Co. (Coarse)..... 7,000 29,500

August 11.—By the *Colon*=Mollendo:
W. R. Grace & Co. (Cauchó)..... 27,000

August 15.—By the *Lucania*=Liverpool:
A. T. Morse & Co. (Fine)..... 11,500

August 17.—By the *Zeeland*=Antwerp:
W. L. Gough & Co. (Fine)..... 3,500

August 19.—By the *Lincoln*=Hamburg:
New York Commercial Co. (Fine)..... 7,000
W. L. Gough & Co. (Fine)..... 11,500 18,500

August 19.—By the *Campania*=Liverpool:
Poel & Arnold (Fine)..... 11,500

August 21.—By the *Lusitania*=Liverpool:
General Rubber Co. (Fine)..... 135,000

OTHER NEW YORK ARRIVALS. CENTRALS.

July 24.—By the *Mexico*=Frontera:
E. Steiger & Co. 5,000
Harburger & Stack..... 5,000
General Export Co. 2,500
H. Marquardt & Co. 3,500
Graham, Hinkley & Co. 1,000 17,000

July 27.—By the *El Valle*=Galveston:
New York Commercial Co. *84,000

July 28.—By the *Allianza*=Colon:
Hirzel, Feltmann & Co. 7,000
Isaac Brandon & Bros. 6,000

Henry Mann & Co. 1,000
Piza Nephews Co. 1,000 16,000
G. Amsinck & Co. 1,000

July 28.—By the *Cienfuegos*=Tampico:
Edward Maurer *80,000
New York Commercial Co. *55,000
Poel & Arnold *22,500
H. Marquardt & Co. *3,500 *161,000

July 29.—By the *Spartan Prince*=Bahia:
Poel & Arnold 45,000
J. H. Rossback & Bros. 31,000
New York Commercial Co. 23,000
A. Hirsch & Co. 22,500
A. D. Hitch & Co. 7,000 128,500

July 29.—By the *Joachim*=Colon:
Meeker & Co. 5,000
Hirzel, Feltmann & Co. 3,500
D. A. De Lima & Co. 3,000
Kunhardt & Co. 3,000
Wessels-Kulenkamp Co. 2,000
G. Amsinck & Co. 1,000
Aramburo Co. 1,000 18,500

August 1.—By the *Seguranza*=Frontera:
Harburger & Stack..... 7,000
E. C. Tibbals & Co. 1,500
American Trading Co. 1,000

GUAYULE

**WHEN PROPERLY CURED AND MIXED WITH OTHER COMPOUNDS
IS THE CHEAPEST RUBBER ON THE MARKET**

**There is As Much Difference Between the Various Brands of Guayule
as Between Fine Para and Shoddy**

Guayule made from old, sun exposed shrub is **dead, dirty and sticky**, and no amount of washing will make it clean, while rubber made from freshly cut, selected shrub, has **life**, low percentage of resin and is practically clean.



has been on the market for several years and is known to be the best Guayule made as to life, strength, purity and low percentage of resin.

There is a large demand for a specially prepared Guayule, dry and ready for use, which we have met in



As this rubber is made exclusively from our high grade "Parra" Guayule, uniformity and absolute purity is guaranteed. No mixing in of cheap compounds to bring down the price. Durango rubber is nothing but Parra brand pure Guayule prepared so that anybody can use it.

**CONTRACTS MADE FOR REGULAR MONTHLY
OR WEEKLY DELIVERIES**

For Samples and Quotations apply to

ED. MAURER

97 Water St., NEW YORK

**Sole Representative of the MADERO interests in Mexico,
largest owners of Guayule**

General Export Co.	1,000	
H. Marquardt & Co.	1,000	11,500
August 3.—By the <i>El Norte</i> —Galveston:		
Edward Maurer	22,500	
August 3.—By the <i>Lucania</i> —Colon:		
Piza Nephews	1,500	
Eggers & Heinlein	1,500	
G. Amsinck & Co.	1,000	
Dumarest Bros.	1,000	
K. Mandell & Co.	1,000	6,000
August 3.—By the <i>Lebanon</i> —Bahia:		
Poel & Arnold	15,000	
New York Commercial Co.	22,500	
L. H. Rosshack & Bros.	15,000	
A. Hirsch & Co.	10,000	93,500
August 6.—By the <i>Esperanza</i> —Colon:		
Isaac Brandon & Bros.	1,000	
American Trading Co.	1,000	
Jose Julia & Co.	1,000	
In Transit	2,000	5,000
August 8.—By the <i>Bayamo</i> —Tampico:		
Edward Maurer	95,000	
Isaac Kubie & Co.	5,000	
H. Marquardt & Co.	3,500	
American Trading Co.	7,000	
Akron, Ohio	4,500	115,000
August 11.—By the <i>Colon</i> —Colon:		
Hirzel, Feltmann & Co.	5,000	
A. Santos & Co.	3,000	
G. Amsinck & Co.	4,500	
Isaac Brandon & Bros.	1,000	11,500
August 14.—By the <i>Carib II</i> —Cebu:		
Eggers & Heinlein	2,500	
H. W. Peabody & Co.	1,000	3,500
August 14.—By the <i>Sigsmond</i> —Colombia:		
Kunhardt & Co.	3,500	
A. Held	1,000	
I. Brandon & Bros.	1,000	
Mecke & Co.	1,000	
Stanley, Jordan & Co.	1,000	7,500
August 14.—By the <i>Moira Castle</i> —Frontera:		
Kramer & Forster	5,500	
E. Steiger & Co.	3,500	
Harburger & Stack	3,500	
General Export Co.	1,000	
Graham, Hinkley & Co.	1,000	
H. Marquardt & Co.	1,000	15,500
August 17.—By the <i>Adriance</i> —Colon:		
G. Amsinck & Co.	2,500	
A. Rosenthal's Sons	1,000	
Aramburo Co.	1,000	4,500
August 19.—By the <i>Siberia</i> —Greytown:		
Suzarte & Whitney	4,000	
G. Amsinck & Co.	1,500	
Jose Julia & Co.	1,000	6,500
August 20.—By the <i>Fama</i> —Tampico:		
Edward Maurer	55,000	
August 20.—By the <i>El Norte</i> —New Orleans:		
Eggers & Heinlein	2,500	
August 21.—By the <i>Corsican</i> —Bahia:		
Poel & Arnold	45,000	
J. H. Rosshack Bros.	38,000	83,000
August 21.—By the <i>Albania</i> —Colon:		
G. Amsinck & Co.	8,500	
Hirzel, Feltmann & Co.	8,500	
L. Johnson & Co.	4,500	
I. Brandon & Bros.	4,000	
Roldan & Van Sickle	2,500	
A. M. Capens' Sons	2,000	
Elmenhorst & Co.	1,000	30,500
August 22.—By the <i>Mexico</i> —Frontera:		
E. Steiger & Co.	7,500	
Harburger & Stack	2,000	
American Trading Co.	1,500	
General Export Co.	1,000	
Pablo Calvet Co.	1,000	13,000
August 22.—By the <i>Manzanillo</i> —Tampico:		
Edward Maurer	95,000	
New York Commercial Co.	50,000	
Poel & Arnold	34,000	
Renschle & Helle	44,500	220,500

*This sign, in connection with imports of Centrals, denotes Guayule rubber.

AFRICANS	
July 1.—By the <i>Bayamo</i> —Bahia:	
A. T. Morse & Co.	9,000
July 25.—By the <i>Cedric</i> —Liverpool:	
General Rubber Co.	1,000
Poel & Arnold	5,000
July 25.—By the <i>Lucania</i> —Liverpool:	
General Rubber Co.	4,500
July 27.—By the <i>Toumanie</i> —Havre:	
Poel & Arnold	1,500
July 28.—By the <i>Kronland</i> —Antwerp:	
A. T. Morse & Co.	5,000
Rubber Trading Co.	13,500
Poel & Arnold	14,000
Joseph Cantor	4,500
July 30.—By the <i>Patricus</i> —Hamburg:	
A. T. Morse & Co.	7,000
George A. Alden & Co.	6,500
Poel & Arnold	2,500
July 31.—By the <i>Etruria</i> —Liverpool:	
General Rubber Co.	15,000
August 1.—By the <i>Baltic</i> —Liverpool:	
George A. Alden & Co.	24,500
Livesey & Co.	3,500
August 4.—By the <i>Falerland</i> —Antwerp:	
George A. Alden & Co.	37,000
A. T. Morse & Co.	13,500
R. Johnson & Co.	9,000
Rubber Trading Co.	7,000
August 6.—By the <i>Unbrua</i> —Liverpool:	
General Rubber Co.	65,000
Poel & Arnold	15,000
August 7.—By the <i>Pictoria</i> —Hamburg:	
George A. Alden & Co.	13,500
August 7.—By the <i>Cedric</i> —Liverpool:	
General Rubber Co.	112,000
August 10.—By the <i>Bluecher</i> —Hamburg:	
General Rubber Co.	28,500
August 10.—By the <i>Finland</i> —Antwerp:	
Joseph Cantor	5,500
W. L. Gough & Co.	1,500
August 13.—By the <i>Waldsee</i> —Hamburg:	
A. T. Morse & Co.	11,500
Poel & Arnold	2,000
August 15.—By the <i>Lucania</i> —Liverpool:	
A. T. Morse & Co.	13,500
General Rubber Co.	3,500
Livesey & Co.	1,000
August 19.—By the <i>Lincoln</i> —Hamburg:	
A. T. Morse & Co.	24,500
George A. Alden & Co.	4,500
August 19.—By the <i>Campama</i> —Liverpool:	
Poel & Arnold	15,000
A. T. Morse & Co.	5,000
General Rubber Co.	4,500

EAST INDIAN.	
July 27.—By the <i>Philadelphia</i> —London:	
A. T. Morse & Co.	7,000
July 27.—By the <i>Minneapolis</i> —London:	
New York Commercial Co.	11,500
H. A. Gould Co.	3,500
July 31.—By the <i>Indra</i> —Singapore:	
George A. Alden & Co.	20,000
August 3.—By the <i>Minnetonka</i> —London:	
Otto Isenstein & Co.	11,500
Joseph Cantor	4,500
C. Von Posten	2,000
August 8.—By the <i>New York</i> —London:	
A. T. Morse & Co.	7,000
August 10.—By the <i>Matappa</i> —Colombo:	
A. T. Morse & Co.	5,500
August 11.—By the <i>Mesaba</i> —London:	
L. C. Hopkins Co.	17,500
General Rubber Co.	10,000
Robinson & Co.	2,500
George A. Alden & Co.	2,000
August 21.—By the <i>Ghazee</i> —Singapore:	
Otto Isenstein & Co.	20,000
George A. Alden & Co.	7,500

W. L. Gough & Co.	7,500
Admiral & Co.	1,000
August 22.—By the <i>Philadelphia</i> —London:	
A. T. Morse & Co.	11,500
August 24.—By the <i>Minnetonka</i> —London:	
A. T. Morse & Co.	11,500
Robinson & Co.	11,000
Rubber Trading Co.	4,500
*Denotes plantation rubber.	
GUTTA PERCHA.	
July 23.—By the <i>Lucania</i> —Liverpool:	
Heabler & Co.	55,000
July 31.—By the <i>Tauranadu</i> —Singapore:	
Robinson & Co.	175,000
Heabler & Co.	22,000
N. Joachims & Co.	130,000
George A. Alden & Co.	110,000
Winter & Smidde	55,000
W. L. Gough & Co.	720,000
August 7.—By the <i>Cedric</i> —Liverpool:	
Heabler & Co.	45,000
August 11.—By the <i>Mesaba</i> —London:	
Heabler & Co.	30,000
August 21.—By the <i>Ghazee</i> —Singapore:	
Heabler & Co.	175,000
N. Joachims & Co.	125,000
Robinson & Co.	55,000
W. L. Gough & Co.	55,000

GUTTA PERCHA.	
August 19.—By the <i>Lucania</i> —Hamburg:	
Robert Soltan Co.	8,000
July 25.—By the <i>Prince Hallem</i> —Curapano:	
G. Amsinck & Co.	2,000
Frame & Co.	1,500
August 3.—By the <i>Matappa</i> —Trinidad:	
Frame & Co.	2,500
August 5.—By the <i>Korona</i> —Demerara:	
George A. Alden & Co.	3,500
August 10.—By the <i>Amsterdam</i> —Rotterdam:	
W. L. Gough & Co.	2,500
August 11.—By the <i>Narivame</i> —Demerara:	
Middleton & Co.	9,000
Frame & Co.	6,500
August 17.—By the <i>Ullev</i> —Demerara:	
George A. Alden & Co.	10,000
August 18.—By the <i>Parima</i> —Demerara:	
George A. Alden & Co.	15,000
Middleton & Co.	5,500
August 24.—By the <i>Cappename</i> —Demerara:	
Sanford Parks & Co.	115,500
August 25.—By the <i>Statendam</i> —Rotterdam:	
Earl Brothers	5,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—JULY.		
Imports.	Pounds.	Value.
India-rubber	5,395,780	\$3,224,101
Balata	127,995	54,254
Gutta-percha	1,400	2,050
Gutta-jelutong (Pontianak)	1,380,918	30,385
Total	6,825,093	\$3,310,790
Exports:		
India-rubber	82,036	\$2,050
Reclaimed rubber	49,442	5,951
Rubber scrap imported	501,042	\$34,841

BOSTON ARRIVALS.

Pounds.		
July 23.—By the <i>Badenia</i> —Hamburg:		
W. L. Gough & Co., Africans	8,300	
July 26.—By the <i>Satsenna</i> —Singapore:		
In transit, Jelutong	474,000	
Total	482,300	

PARA EXPORTS OF INDIA-RUBBER, JULY, 1908 (IN KILOGRAMS).

NEW YORK.					EUROPE.				
EXPORTERS.	Fine.	Medium.	Coarse.	Cauch.	TOTAL.	Fine.	Medium.	Coarse.	TOTAL.
Schrader, Gruner & Co.	49,243	10,330	43,171	93,750	38,440	3,499	1,555	1,571	44,040
Gordon & Co.	59,330	7,310	128,754	195,394	9,350	870	1,980	12,200	207,594
Adelbert H. Alden	46,820	16,018	38,783	70,146	172,307	14,327	2,080	2,344	200,827
E. Pinto Alves & Co.	6,640		17,499	23,950	31,790		48,180		70,970
R. Suarez & Co.				58,570			6,172	33,757	68,509
J. Matquez & Co.	21,700	2,720	21,780	46,200	14,280	1,530	5,040		21,750
De Lagtellier & Co.	30,600	6,970	29,370	66,940			990		97,030
R. O. Ahlers & Co.	6,630		1,210	7,849	21,070		3,978	20,902	55,095
Pires Teixeira & Co.	6,800		7,500	14,300	13,170		15,180		28,010
Scholz, Hartig & Co.			13,530	935	14,405	6,713	1,217	232	8,652
Singlehurst, Brockhurst & Co.					212				312
Sundries								3,300	3,300
Itacatiara direct					1,123			580	2,000
Manaos direct	84,813	33,931	42,176	38,358	169,378	1,7105	24,063	12,145	242,435
Total, July	303,465	77,885	343,054	100,430	834,743	33,645	33,166	107,931	1,462,488



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Liverpool.

WILLIAM WRIGHT & Co. report [August 1]:

Fine Para.—The market has been active during the month, and prices after advancing for the first half have gradually declined, and close practically the same as last month; American demand was no doubt responsible for the advance, but as the orders from the States have ceased, we cannot look for much improvement till they again come along. Receipts, we understand, are to be liberal and early, so this, if correct, will tend to keep prices down.

EDMUND SCHLUTER & Co. report [July 31]:

Fluctuations in prices of Pará grades during the month were small. Following the active demand from America for old imports of Bolivian and Upper fine prices of these two advanced to 45. rd. and 45. 01/2 d., respectively. With cessation of this demand, and also owing to speculative sales of forward delivery, prices receded. Trade reports both in Europe and America show some improvement, but it is too early to say with confidence that normal conditions have returned. Meanwhile demand seems sufficient to absorb the available supplies, and prices should therefore remain about steady for actual rubber.

THE WORLD'S VISIBLE SUPPLY OF PARA, JULY 31.

	1908.	1907.	1906.	1905.	1904.	1903.
Tons.....	3002	2741	2830	2275	1005	2550
Prices, hard line 3/10.....	4 0 1/2	5 2 1/4	5 6 1/4	4 11 3/4	4 0 1/2	

LIVERPOOL STOCKS OF AFRICAN RUBBER, JULY 31

	1908.....	1905.....	1902.....	1901.....	1900.....
1908.....	391	371	516		
1907.....	280	473	728		
1906.....	388	371	823		

R. Singlehurst & Co., Limited, have been registered in England with £100,000 capital to acquire the business of R. Singlehurst & Co., of Liverpool, and to adopt an agreement with G. Brocklehurst and F. Brocklehurst, and to carry on a business of merchants and shippers in Great Britain, at Para, and elsewhere. They are handlers to an important extent of crude rubber.

Plantation Rubber From the Far East.

EXPORTS FROM CEYLON (JANUARY 1—JUNE 20.)

[Including 8,000 pounds not the produce of Ceylon.]

	Pounds.		Pounds.
To Great Britain.....	182,617	To United States.....	94,600
To France.....	1,054		
To Germany.....	13,738	Total.....	306,805
To Denmark.....	186	Same dates, 1907.....	209,618
To Italy.....	880	Same dates, 1906.....	139,697
To India.....	806	Same dates, 1905.....	49,773
To Australia.....	12,834	Same dates, 1904.....	36,000

EXPORTS FROM THE FEDERATED MALAY STATES.

STATES.	1907.	1908.
Perak.....	pounds 68,591	189,633
Selangor.....	554,324	866,567
Negri Sembilan.....	208,610	325,958
Pahang.....		
Total.....	801,525	1,382,158

TOTAL EXPORTS FROM MALAYA (JANUARY 1—JUNE 26.)

[Including the produce of the Federated Malay States and some from neighboring territory, but not including Ceylon.]

	Singapore.	Penang.	Total.
To Great Britain.....	pounds 845,407	302,800	1,238,267
To Other Europe.....	37,497	74,000	111,467
To United States.....	400		400
To Japan.....	4,267		4,267
To Australia.....	11,500		11,500
To Ceylon.....	116,267	33,810	150,077
Total.....	1,015,368	500,610	1,515,978
Same dates, 1907.....	631,308	61,804	693,262
Same dates, 1906.....	257,600	40,534	298,134

YIELD OF PLANTATIONS IN POUNDS.

	1908.	1907.
Vallambrosa Rubber Co.:.....		
Four months ended July 31.....	70,785	69,069
Kepitigalla Rubber Estates:		
Twelve months ended March 31.....	32,264	42,612
Linggi Plantations:		
May.....	15,500	
Anglo-Malay Rubber Co.:.....		
Six months ended June 30.....	154,786	77,555
Consolidated Malay Rubber Estates:		
Six months ended June 30.....	30,381	19,002
Beverlac (Selangor) Rubber Co.:.....		
Six months ended June 30.....	10,615	10,200
Perak Rubber Plantations:		
May.....	3,226	2,337
Highlands and Lowlands Pará Rubber Co.:.....		
Six months ended June 30.....	81,656	

Rubber Receipts at Manaoas for July.

FROM—	1908.	1907.	1906.
Rio Purús-Acre.....	206	234	421
Rio Madeira.....	292	180	266
Rio Jurúa.....	52	31	26
Rio Javary-Iquitos.....	8	7	23
Rio Solimoes.....	11	16	15
Total.....	569	468	751
Cancho.....	143	101	143
Total.....	712	569	894

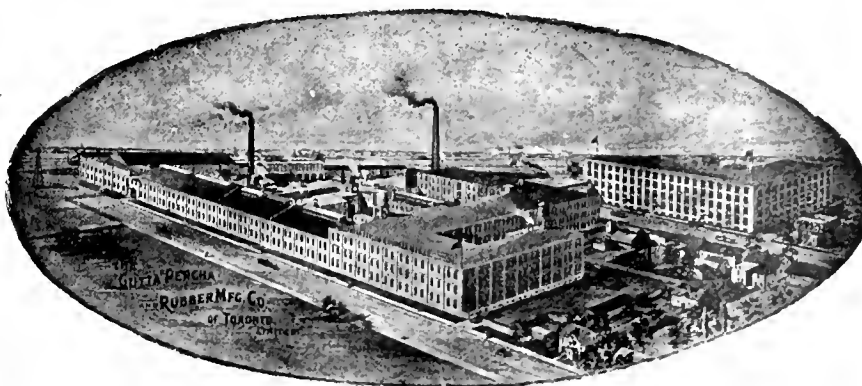
HIGH GRADE RUBBER GOODS

(MADE IN CANADA)

Superior in Quality—Satisfactory in Service



BELTING
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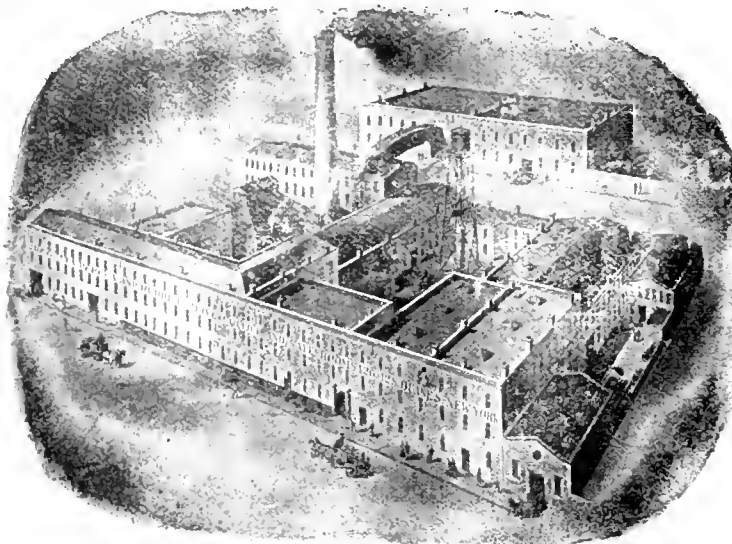
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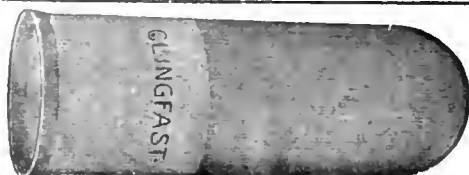
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